MODERN PACKAGING

DESIGNED AND PHOTOGRAPHED FOR MODERN PACKAGING BY RUDY MULLER

SUCCESS STORY: *Good Seasons salad dressings, p. 108*

Background, p. 39 | *World Report, p. 71* | *Cost Cutters, p. 124*

MAY 1961

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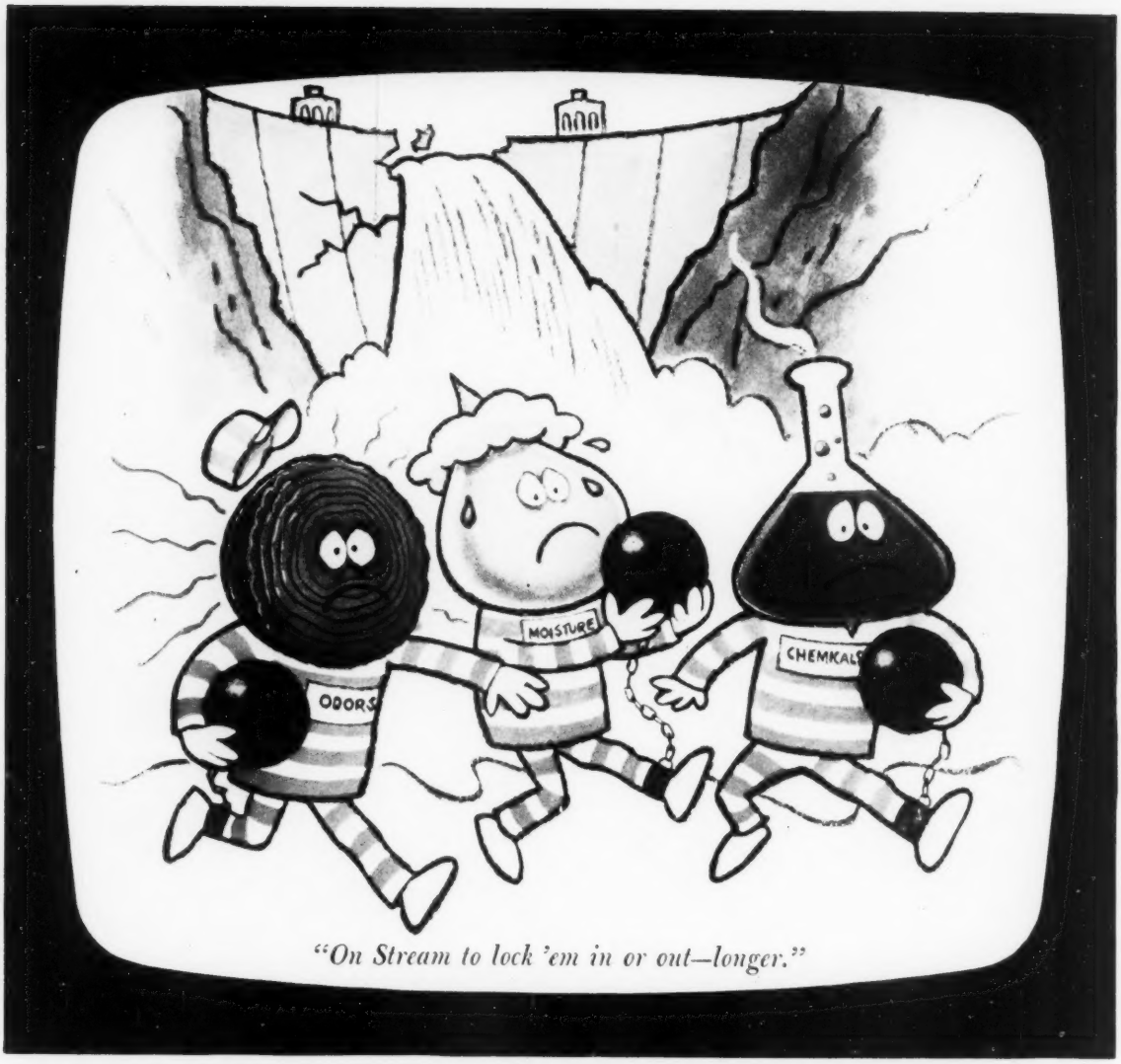

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RESYN 3600 can be coated on paper, paperboard, plastic and other substrates. It also may be applied to fibers. It is of interest to a broad range of industries, including food and other types of packaging, converting, chemical, and textile. Call or write your nearest National office for full information.

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By GOODYEAR

Vitafilm, a Polyvinyl chloride—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

IN THIS ISSUE OF MODERN

MAY 1961 / VOLUME 34 / NO. 9

87 **Extrusion coating on the rise**
New developments in low-cost resins and faster coating techniques make extrusion coating the favored method for adding barrier, heat-seal and high-gloss surfaces to almost any packaging substrate. While polyethylene continues to be the dominant plastic in this process, such resins as polypropylene and vinyl are rapidly coming into their own. Here's a detailed look at what's going on and what's ahead in a field that is bound for explosive growth in this decade.
General interest.

93 **Sanka's big sampling**
In an operation demanding tremendous packaging ingenuity and detail, General Foods is giving away 11.7 million pouches of Instant Sanka coffee by binding the sample packets into the pages of two mass-circulation magazines. Special filling, packing and case-loading techniques assure efficient handling and keep the product from shifting and bulking in the pouch.
Special interest: foods, drugs, marketing.

94 **Tear-open aluminum can**
Significant to suppliers, packagers, retailers and consumers is Kraft Foods' easy-to-open, reclosable, two-piece aluminum can for cheese products. Designed for convenience and table appeal, it is the first can with external tear tape integrated with can edge. High filling speed and long life are reported to make the shallow-drawn can competitive with tinplate. Kraft already is considering use of the can for additional products; its adoption by other food processors rates as a virtual certainty.
Special interest: foods, dairy products.

96 **Multi-cavity foil pan**
Downyflake is off to a competitive head start with a deep-drawn six-cavity foil bake-in tray for frozen muffins. The package is the result of structural and mechanical achievements that assure its rigidity from first handling to last use. Its cost is comparable to that of standard foil-laminated paperboard bake-in containers.
A production-methods article.

100 **The supplier takes a hand**
Why not call in a representative of your container-supplying firm as an active member of the packaging team? At the start of a package-redesign program for a line of lawn-care and handyman's tools, Porter-Cable did just that—and the decision stimulated a flood of ideas that led to general improvement in container efficiency and appeal, at 15% less in cost.
General interest.

104 **Cottage cheese in pouch-pack portions**

Sealtest opens up strong consumer and institutional marketing possibilities with the adoption of polyethylene-coated paper pouches for single servings of cottage cheese. Packed in units of four to eight in a carton, the sealed convenience food achieves new shelf life by eliminating common sources of contamination.
Special interest: all perishable products.

108 **Good Seasons salad dressings**
A *Success Story* (see cover). There's more than mere convenience-in-use behind the enthusiastic acceptance of General Foods' line of dry-form gourmet dressings in foil envelopes. There's also astute awareness of the psychological need for the housewife to "do" for herself—a need which GF satisfies by supplying a marked mixing cruet as part of the original package deal.
General interest.

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Capsule comments and notes on significant news.

50 **Equipment & Materials**
Important new products from suppliers.

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"New signals on deception."

New Address →

MODERN PACKAGING, Executive and Editorial Offices, 770 Lexington Ave., New York 21, N.Y. Phone PLaza 9-2710

Please mail all correspondence, change of address notices, subscription orders, etc., to the above address. Teletype: TWX-NY 1-3063. Cable address: "Breskinpub." Quotations on bulk reprints of articles available on request.

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111 **Packaging Show report**
With the 30th AMA National Packaging Exposition still vivid in memory, here is a hot-off-the-wire report on developments in machinery and materials seen at Chicago's McCormick Place, April 10-13. Included in this report are summaries of all Packaging Conference papers. General interest.

119 **Film shipper for produce**
Rigorous railroad handling from the Rio Grande to Northeastern markets proves the performance of thin-wall high-density polyethylene bulk bags for fresh-produce shipment. The first user, Vahlsing Co., finds that the 3-mil film bags do the job better than any previous container—at big savings in material and shipping costs. Special interest: produce, dry bulk products.

120 **Folding-box flexibility**
With only a simple pressure-sensitive label change, Comet's new package serves for four different model planes. The ingenious three-piece, cushion-wall window carton saves 15% in material compared with a former line of set-up boxes and prevents damage to the costly toys. Special interest: toys, hobbies, designers.

122 **Barrier bag formed and filled**
Packagers of many free-flowing products will be interested in new combination equipment that permits in-plant forming, filling and sealing of a square-bottom paper bag with integral film liner. Replacing in-store grinding and bagging of coffee at the First National chain, it cuts container and labor costs, doubles packaging speeds and saves valuable retail floor space. A production-methods article.

126 **Precision roll labeling**
A new high-speed thermoplastic labeler for glass bottles, using roll-stock labels instead of the conventional cut variety, doubles the speed and pares the cost of labeling three sizes of Cepacol containers. The web-fed unit prevents mislabeling via a reflective photo-eye registration device that electronically reads hidden registration marks and shuts down the machine if marks for another product or bottle size appear. A production-methods article.

TECHNICAL & ENGINEERING

131 **Indications for polypropylene film**
Here's an up-to-date report on the properties and machine performance of this versatile packaging film. While improvements are being made at such a rate that even current data are rapidly becoming obsolete, the material today offers excellent performance at competitive or lower cost in applications requiring the preservation of moisture content and aroma, as well as in the packaging of fatty foods. *By Edward T. Severs and Robert J. Ridgway.*

135 **Resources in expired patents**
It may be that some long-forgotten patent paper, yellowing in the archives, holds the solution to your packaging problem. Many expired patents, embodying construction designs that were impractical in their day, doubtless can be restudied and adapted to today's vastly improved materials and production techniques. Case in point: A 37-year old patent for a folding box that achieves new vitality and significance in light of modern facilities. *By S. J. Leone.*

142 **Questions & Answers**
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MP

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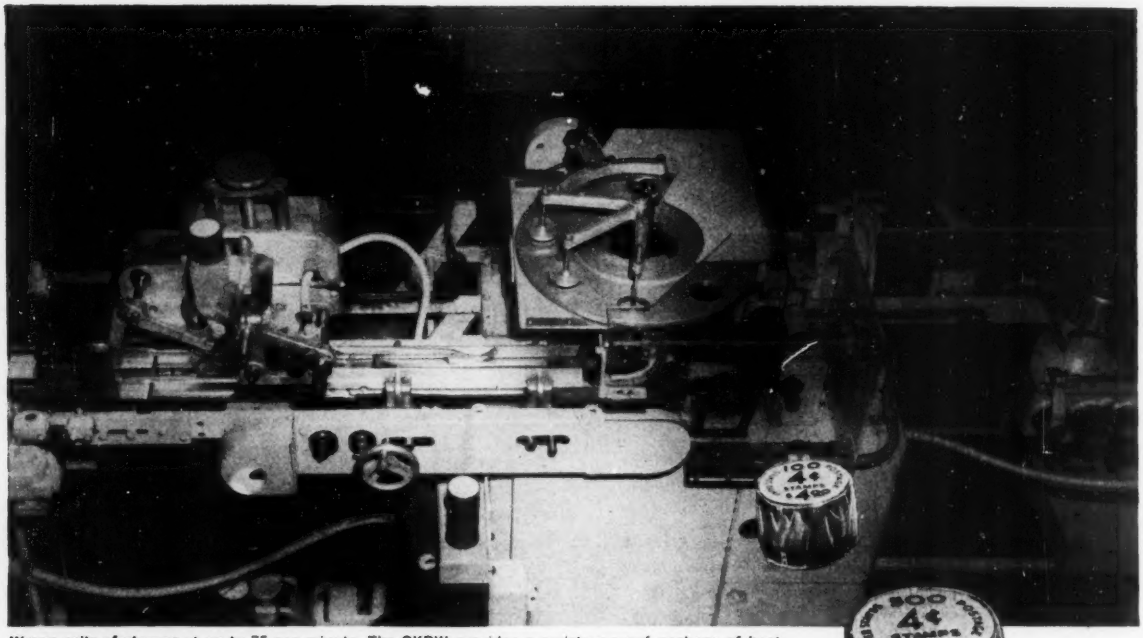
ABC ABP



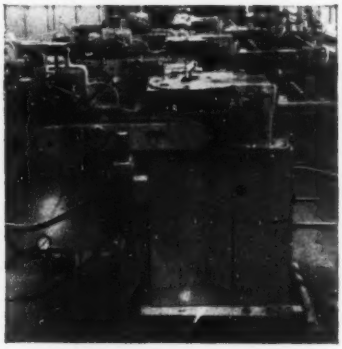
Wraps coils of stamps at up to 75 per minute. The CKDW provides a moisture-proof package of heat-sealed plastic film. It allows making change-overs from one size coil to another in a matter of minutes.

Crompton & Knowles Packaging Corp. licks a stamp problem

A tremendously increased demand for postage stamps in coils rather than in the familiar sheet form posed a packaging problem for the U.S. Bureau of Engraving and Printing. The problem: to rapidly and efficiently wrap, label and seal coils of 100, 500, 1,000 and 3,000 stamps in moisture-proof packages having maximum security.

The solution was provided by a Crompton & Knowles CKDW wrapping machine, designed especially to meet the unique requirements. Operating at speeds up to 56 packages a minute, the CKDW wraps each roll in plastic film, accurately places a label over the folds and finally heat seals the entire package. Fifteen of these units are currently in operation at the Bureau.

Highly-specialized engineering performance like this is evidence of Crompton & Knowles' ability to solve all your packaging problems. Whether you require a simple wrapping machine or a completely integrated, multiple-operation packaging project, get complete details by writing Wrap-King Division, Crompton & Knowles Packaging Corporation, Holyoke, Mass.



Battery of wrapping machines is automatically fed with coils of stamps from belt conveyor.

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They chose Dobeckmun because Dobeckmun creates the package for the purpose. DURAFILM, for instance, is a combination of films that prevents "pucker", the package distortion commonly caused by oil and salt. METALAM is a lamination of aluminum foils to films and papers—to suit your special needs. And the combination that protects your product also gives it eye appeal. An idea becomes a meal and Dobeckmun serves it handsomely. Your stamp on every package — brilliantly! Find out all about it from your representative or write to THE DOBECKMUN COMPANY, a Division of The Dow Chemical Company, Cleveland 1, Ohio • Berkeley 10, California • Offices in most principal cities.

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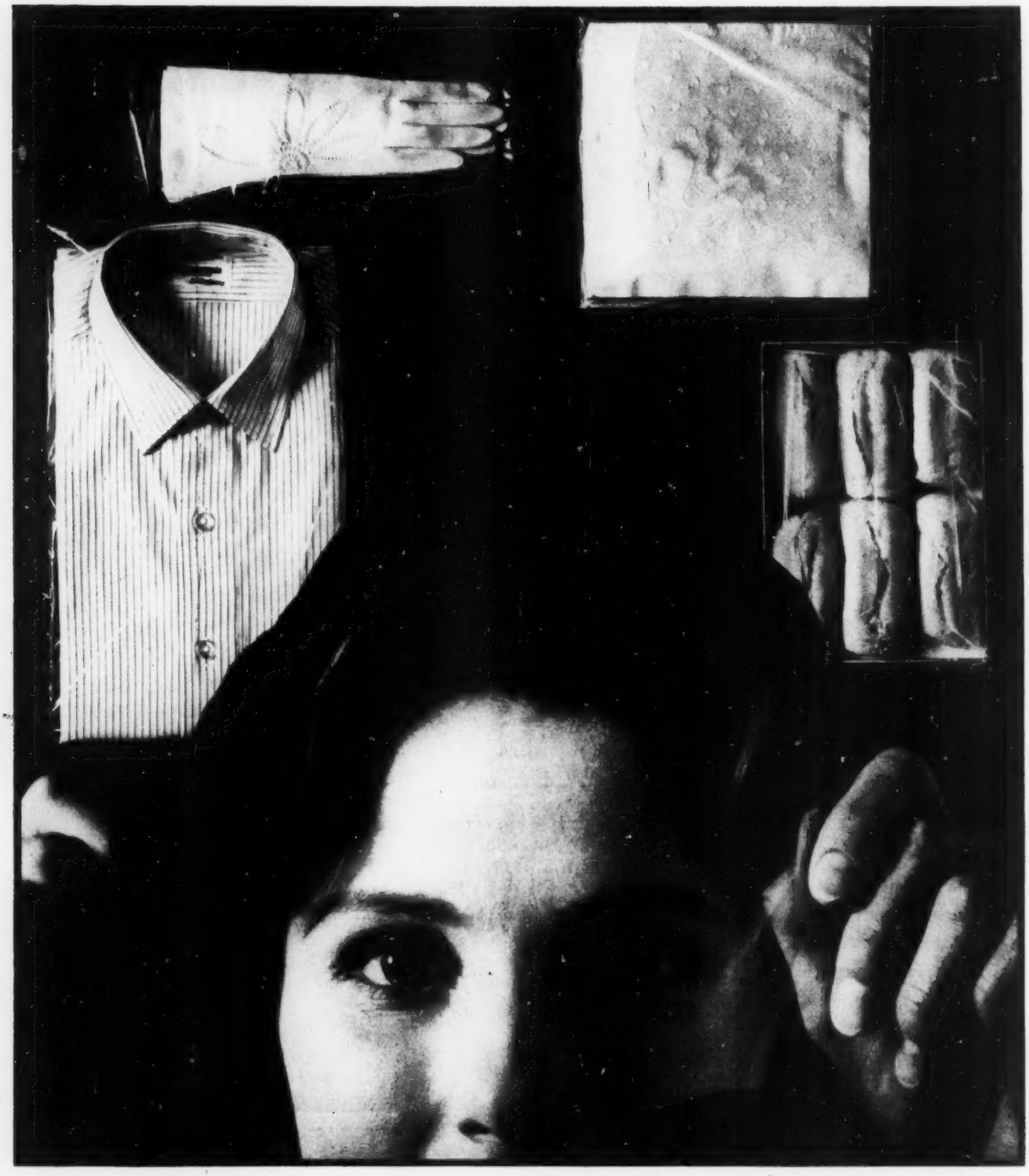
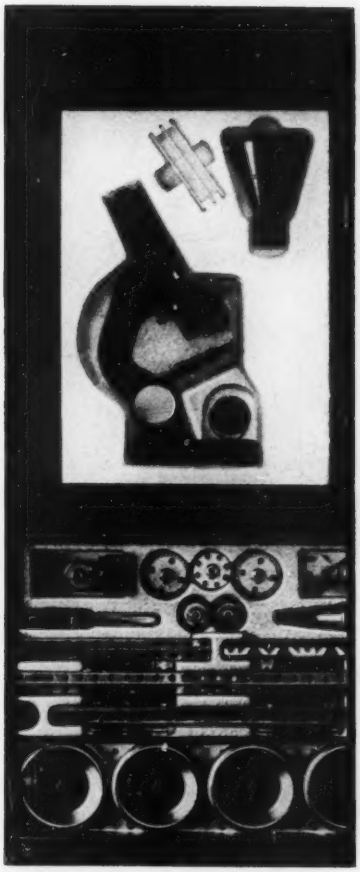
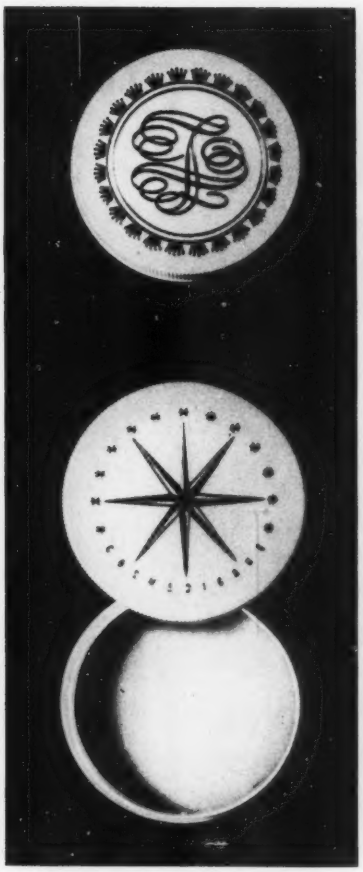




Foam trays simplify toy packaging

A. C. Gilbert Company uses DYLITE® expandable polystyrene trays because they completely eliminate costly interior packing materials. DYLITE trays are strong, good looking, easy to assemble and load—they save on labor costs. They also cut shipping costs because they're extremely lightweight.

DYLITE packages come in any size or shape; they fit firmly around the product and protect it from shipping damage. They make an attractive display because their smooth, colorful surface won't smear, chip or flake. DYLITE parts molded by: Sullifoam Products, Willow Grove, Pennsylvania.



Plastic changes the face of compacts

If you've been to a cosmetic counter recently, you've probably noticed a new look in compacts. Many cosmetic manufacturers have switched to plastic cosmetic cases because they cost less and make a better-looking package.

One plastic that has helped revolutionize the compact field is DYLENE® polystyrene. It's a designer's plastic; you can choose from over 15 formulations with balanced properties. DYLENE molds easily in a wide range of colors in a smooth, glossy finish. It is lightweight and has good heat and shock resistance. These compacts were molded by Augusta Plastics, Bronx, New York.

New cap has a "snip-off" tip

This convenient feature has captured the fancy of time-saving housewives. They just scissor the top of this new DYLAN® polyethylene cap and get a measured flow of Liquid Lux with every squeeze of the bottle. There's no more burdensome measuring by capsful. This new cap tightly grips the neck of the bottle . . . no drips, no leaks.

DYLAN caps have a smooth, glossy finish that won't chip or dent. They're lightweight, rust-proof and they can be molded in any size, shape or color. Molded by: Augusta Plastics, Bronx, N.Y., Formold Plastics, Blue Island, Ill., Gibson Associates, Inc., Cranford, N.J.

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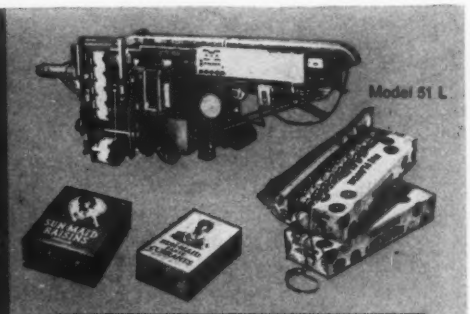
eliminate frustrating production bottlenecks with overwraps of 120 to 240 per minute



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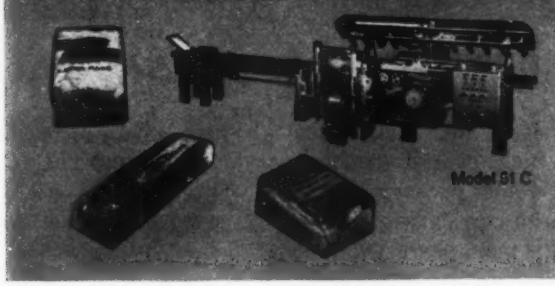
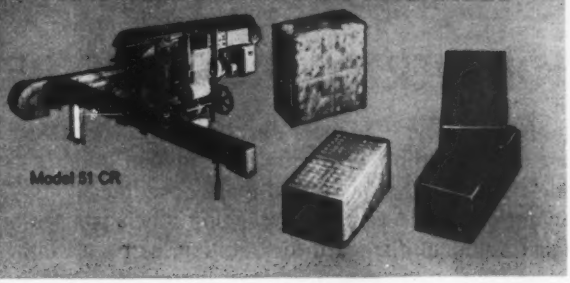


FRACTIONAL CRACKER PACKAGES



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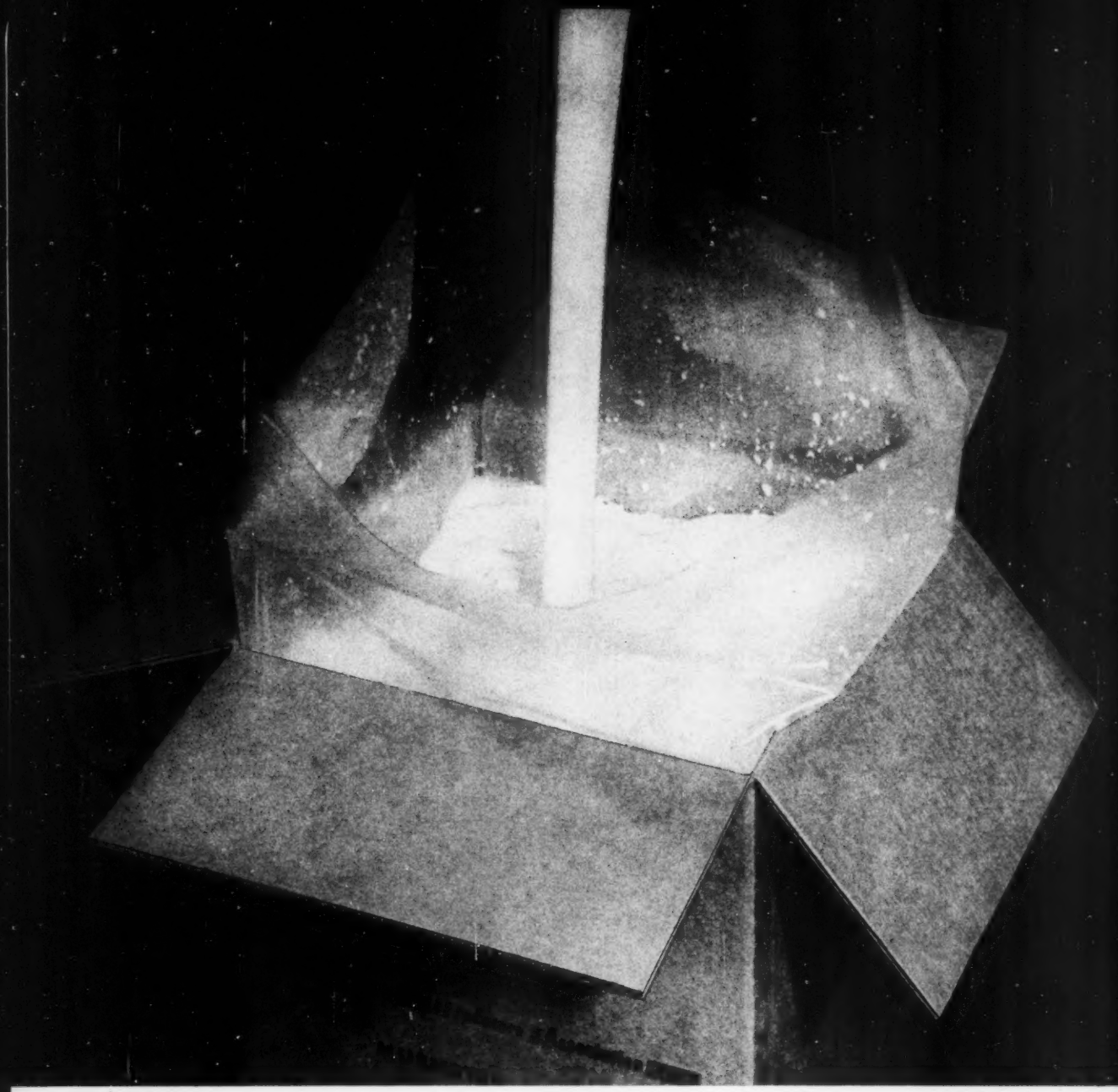

HOERNER CORRUGATED RETIRES THE OLD CREAM CAN

The North Texas Producers Association, in Muenster, Texas, was putting their cream—7 million pounds a year—in cans. They wanted a more economical, convenient container. Hoerner packaging specialists, with their traditional disregard for tradition, came up with a new idea—a container made of corrugated, with a polyethylene liner. The special moisture-resistant carton with hand holes and self-locking bottom measures 9x9x19 and holds approximately 50 pounds of cream. The container, along with an economical, plant-engineered automatic conveying system, greatly increased efficiency and reduced packing labor and costs. A Hoerner packaging engineer will be glad to come up with new packaging ideas for your product, too. Call the plant nearest you today!

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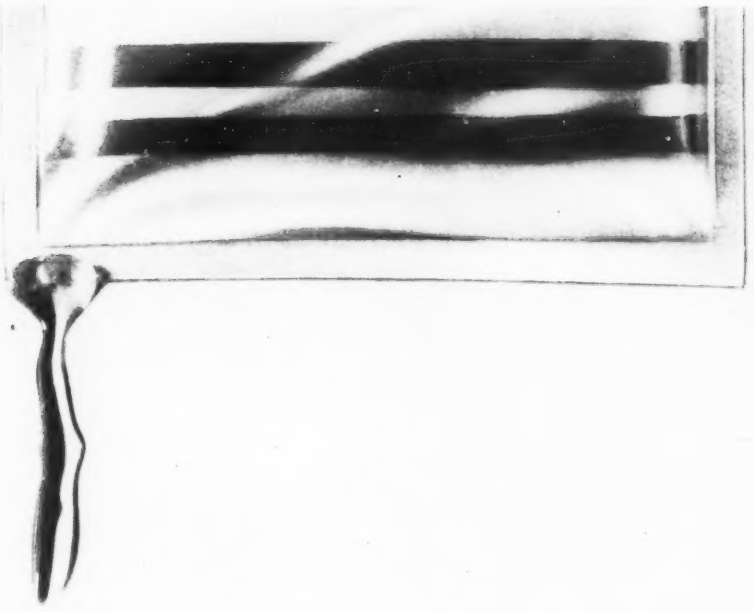

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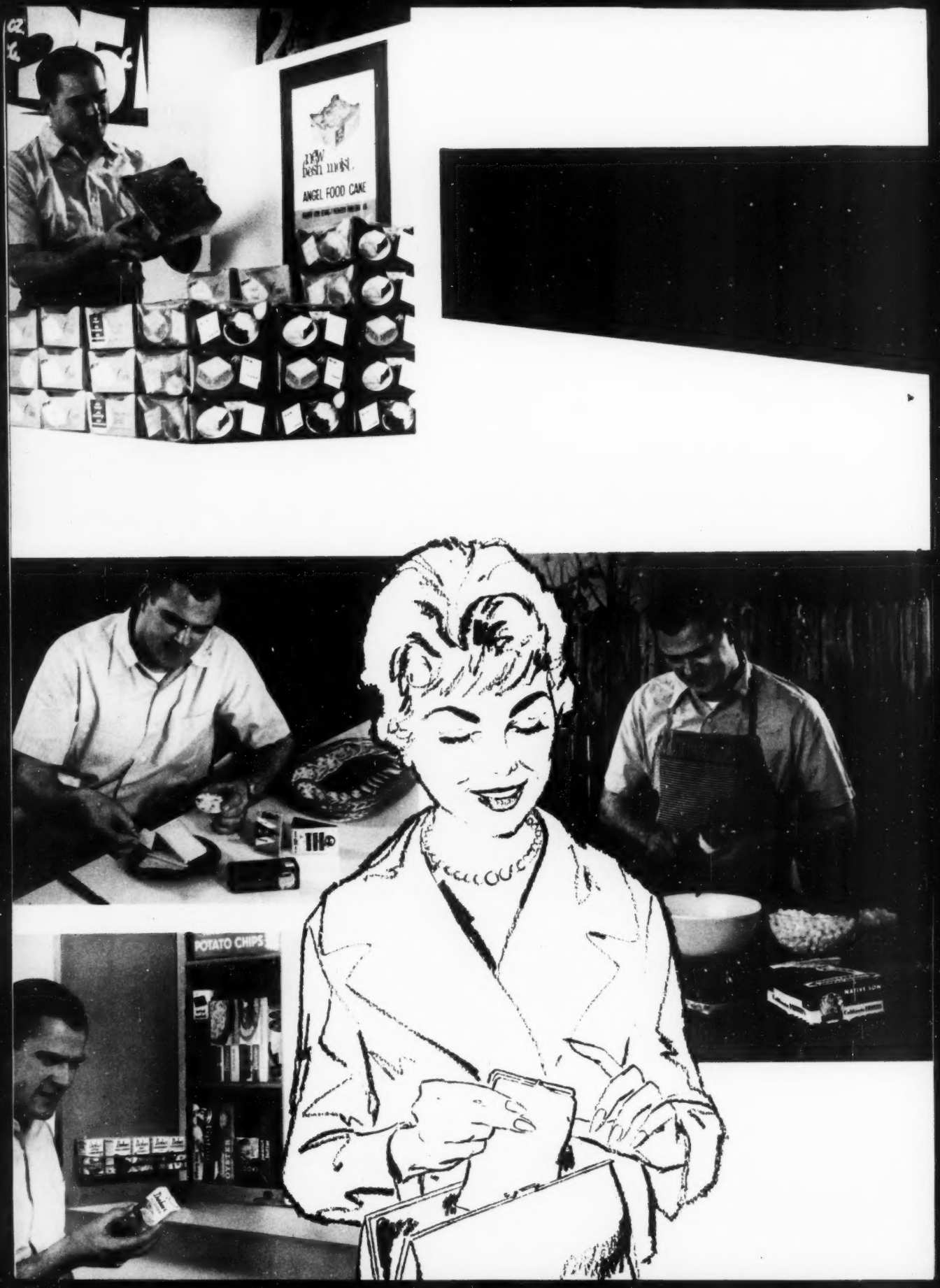
NEW HYDE PARK, NEW YORK • Telephone PRimrose 5-8000 • Sales Offices in principal cities

DESIGNING of flexible packages. **PRINTING**: Gloluxe Gravure Process, Line & Tone Flexography on Cellophane, Polyethylene, Glassine, Extrusion Coatings, Laminations, Acetate, Pliofilm, Foil. **EXTRUSION COATINGS AND LAMINATIONS** on Cellophane, Foils, Mylars, Papers. **CONVERTING**: Rolls, Sheets, Bags, Pouches, Envelopes.


ANGEL FOOD CAKE
POTATO CHIPS

to "wrap 'em up"

marathon

All the fixin's and mixin's he needs for his cook-out come in cartons and other packages by Marathon—leading supplier of fine food packaging.

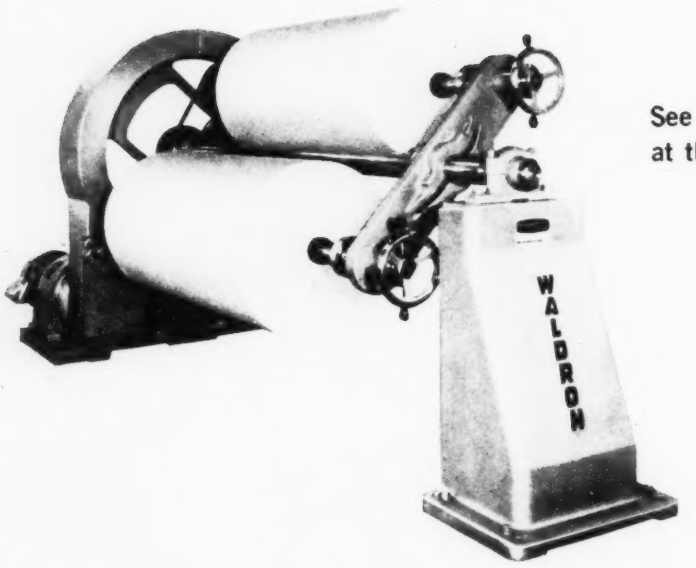
At Marathon your selection of packaging materials is as big as all outdoors—paper, paperboard, films, foils; with laminations and coatings for every occasion.

Next time you have a packaging problem you'd like to wrap up in a hurry, just remember that *whatever* it takes, *Marathon has the answer.*

Marathon, A Division of American Can Company, Menasha, Wisconsin. In Canada: Marathon Packages Limited, 100 Sterling Road, Toronto 3.

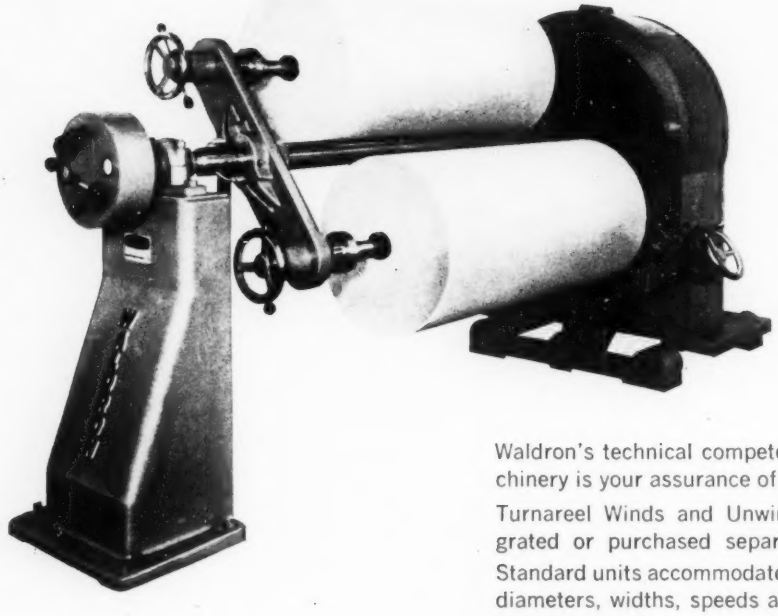
For packaging...and ideas...

you can't beat marathon



See us at Booth 811
at the Plastics Show

Best reason for specifying Turnareels®



Waldron's technical competence in web process machinery is your assurance of Turnareel dependability.

Turnareel Winds and Unwinds can be system-integrated or purchased separately for existing lines.

Standard units accommodate webs in full range of roll diameters, widths, speeds and degree of automation you may require.

Write for Bulletin M-601.

WALDRON

technical competence in web process machinery

WALDRON-HARTIG, Box 791, New Brunswick, N. J. / a division of Midland-Ross Corporation

A good package is a great idea

Welcome to the one-way soft drink bottle! Whether you are a bottler or a retailer, you will find that the no-deposit glass container helps you open up a huge, extra-volume market: the vital *convenience* market.

Thatcher is proud of its part in developing the one-way. And we are ready to help you design a no-return bottle especially for your product...a pace-setting package with display value and consumer appeal. For one-trip or returnable bottles, call on Thatcher. Now.

SHARE in Thatcher's Cooperative Promotion Plan for no-return bottles.

Thatcher

THATCHER GLASS MANUFACTURING COMPANY

375 Park Avenue New York 17, New York

CELON DIVISION, Muscatine, Iowa PLASTIC CONTAINERS, Nashua, N. H. MCKEE DIVISION, Jeannette, Penna.

The LOWEST PRICED Shipping Room Electric ON THE MARKET!

THE REVOLUTIONARY

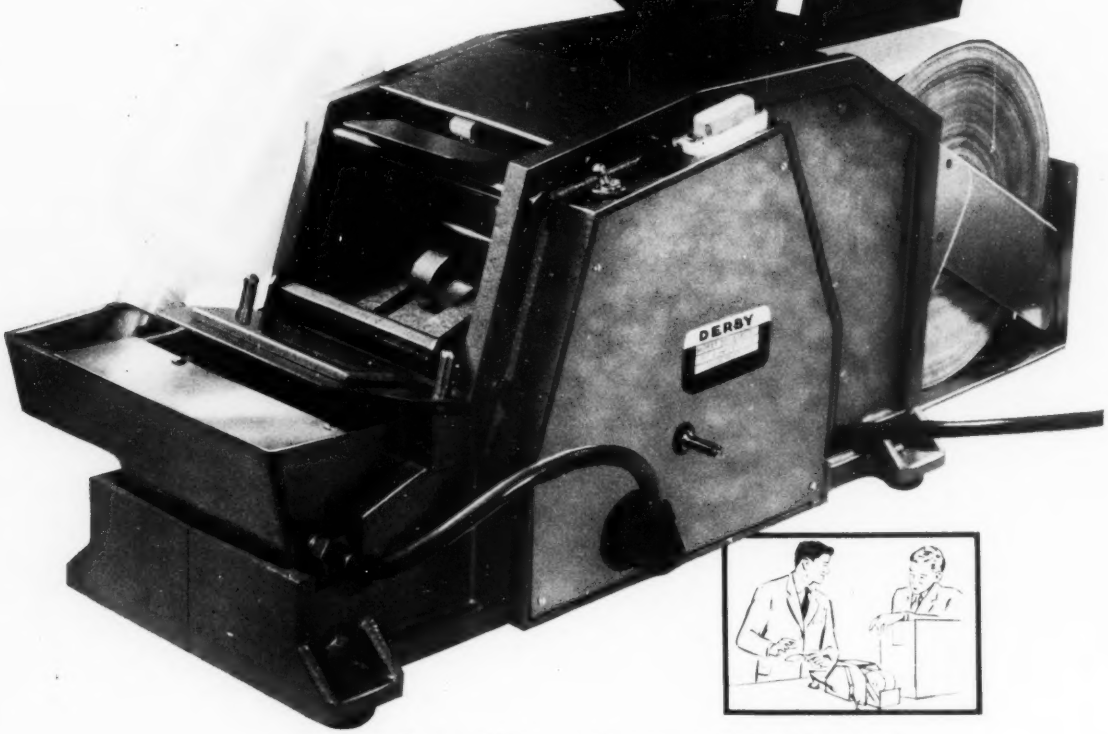
"310"

DERBY ELECTRIC

GUMMED TAPE DISPENSER

TAPE AT A TOUCH!

$144.00



The new Derby "310" electric dispenser was designed for general shipping room operations requiring a constantly changing variety of lengths of tape. Dispenses both reinforced and Kraft tapes in widths up to three inches. There are no dials to set, no adjustments to make. A touch delivers any length instantly! Its very simplicity and ease of operation makes operator-fatigue a thing of the past! The Derby "310" is priced lower than any other electric on the market, yet has all the quality features and dependable performance that are built into all Derby dispensers. Prove it in your own shipping room without obligation!

YOU CAN'T BEAT THE DERBY "310" FOR ECONOMY AND SIMPLICITY

WRITE DEPT. MP5
FOR FREE DEMONSTRATION

DERBY SEALERS DIVISION
MINNESOTA MINING AND MANUFACTURING COMPANY
DERBY, CONNECTICUT

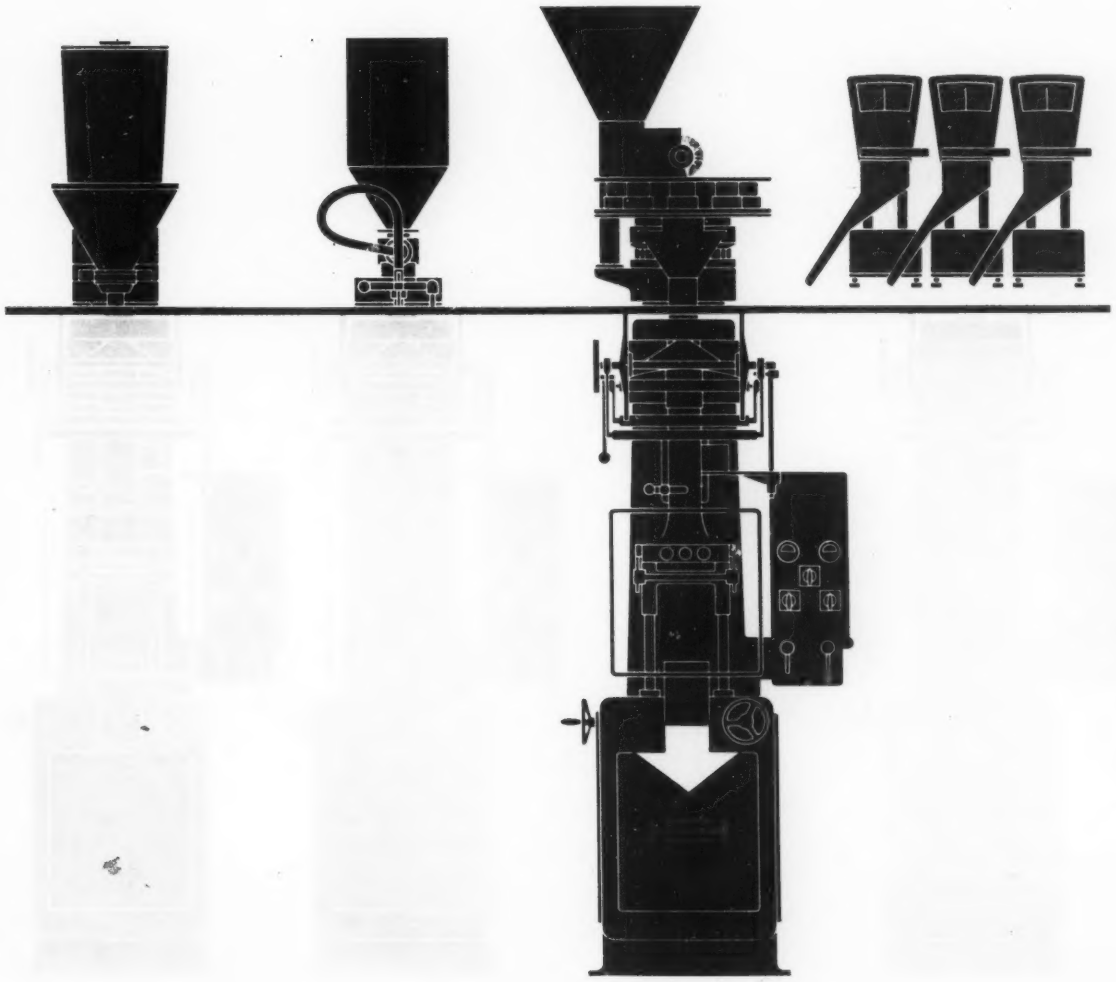
3M COMPANY
... WHERE RESEARCH IS THE KEY TO TOMORROW

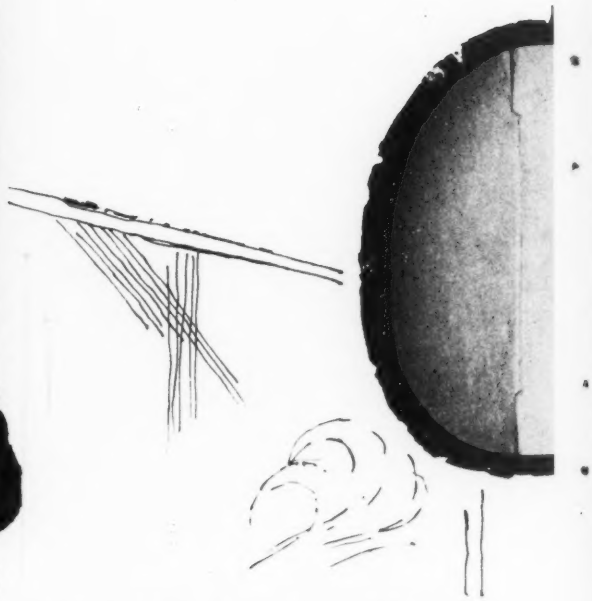
You buy more

when you buy a Hamac-Transwrap®: Each machine offers you a high degree of versatility, both as to bag sizes and to the different types of feed. Rapidly exchangeable accessories will cope with any product you may require bagging at some future date.
More than 1000 installations operate all over the world handling a wide range of products, using volumetric, auger and pump feeds, as well as semi- or fully-automatic counters and weighers. Each of them is producing up to sixty filled and sealed bags per minute, hour after hour, throughout the whole working week. — Discuss your packaging problems with Hamac-Hansella Machinery Corporation, Grand & Ruby Avenues, Palisades Park, N.J.

Hamac Hansella

Hamac-Hansella Maschinen GmbH, Düsseldorf, Western Germany





On the ball for roll-on bottles

Bottle by Wheaton Plastics Company, Mays Landing, N. J. Boxboard for detergent carton coated by Lowe Paper Co., Ridgefield, N. J., converted by F. N. Burt Co., Buffalo, N.Y.

...takes the cake for coated cartons

ALATHON®

the polyethylene resins that bring new versatility to packaging

In the variety of ALATHON polyethylene resins, you'll find the right molding resin for a lightweight, unbreakable roll-on container with just the degree of stiffness required. And you'll find the coating resin that makes possible a gluable oil-resistant carton for a cake of detergent skin cleanser.

These are just two examples of the thousands of applications of ALATHON resins for molding, extrusion coating, thermoforming and unsupported film.

Through careful study and control of resin parameters, Du Pont research has developed an entire family of polyethylene resins to meet the needs of protection, convenience, sales appeal and economy.

Whatever your packaging need, you can be sure of a resin designed for your particular application when you include an ALATHON polyethylene resin in your package planning. Your supplier is in a good position to evaluate the particular formulation of ALATHON that best suits your specific requirements. Or write to: Du Pont Company, Dept. MPA-5, Room 2507A, Nemours Building, Wilmington 98, Del. *In Canada:* Du Pont of Canada Ltd., P.O. Box 660, Montreal, Que.

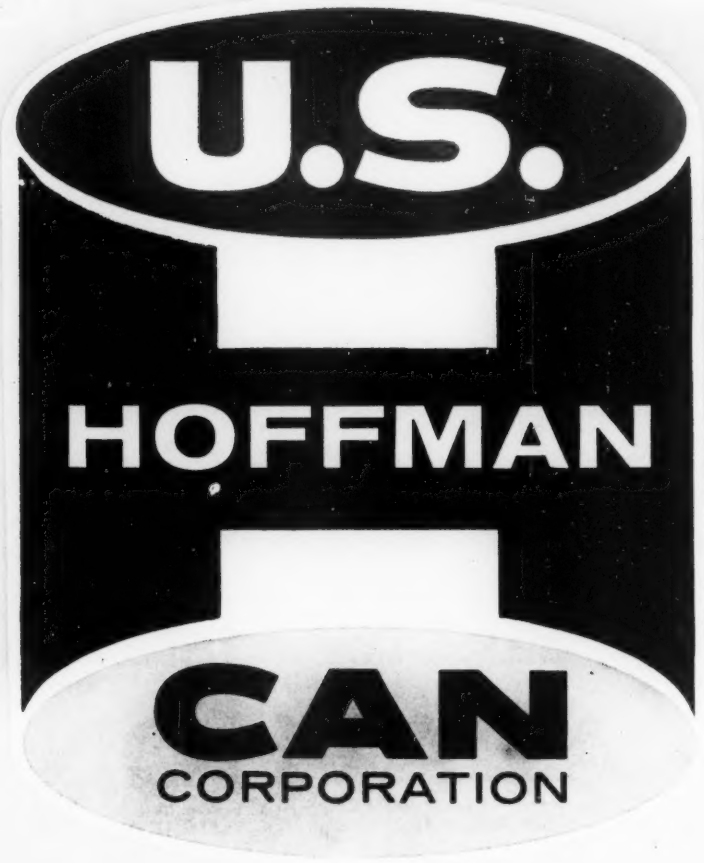
POLYOLEFINS DIVISION
POLYCHEMICALS DEPARTMENT

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

LOOK TO THIS CORPORATE SYMBOL FOR...

service...
quality...
economy...



Look to the all new **U. S. HOFFMAN CAN CORPORATION** for a new concept in can making . . . with all new corporate guidance —all new executive personnel—**AND** an all new interpretation of the meaning of customer service. Find out how this can help you—call for a sales representative today!

Fred Vahlsing and the TR-101 shipping bag for packaged carrots he introduced . . his most recent innovation in a long line of produce packaging "firsts".

Vahlsing adopts shipping bag of MARLEX* TR-101 for packaged carrots . . . top-icing used

Fred Vahlsing, president and founder of Fred H. Vahlsing, Incorporated, has been a leader in the development of produce packaging for nearly four decades. With carrots, he was the first with such innovations as cleaned and wrapped bunches (first with, then without green tops), wire-bound shipping crates, multi-wall paper shipping bags . . . and now, he has adopted tough, lightweight shipping bags made of MARLEX TR-101 high density plastic.

"These new plastic bags of TR-101", he relates, "cut our shipping costs because they permit the use of inexpensive top-icing. The multi-wall paper bag, that's standard today, requires more expensive refrigeration. TR-101 bags, on the other hand, have the strength and moisture resistance to withstand top-icing. The bags we use are only 3¼ mils thick. MARLEX TR-101 is an unbelievably strong plastic."

In addition to strength and moisture resistance, bags made from MARLEX TR-101 high density resin can withstand extremes of temperature (from hot storage at 140°F to cold storage below zero F) . . . and resist rot, fungi, and bacteria. Testing has also established that thinner-walled TR-101 bags outperform thicker-walled low density polyethylene bags . . . having up to 38% more tensile strength and 2½ times the impact strength.

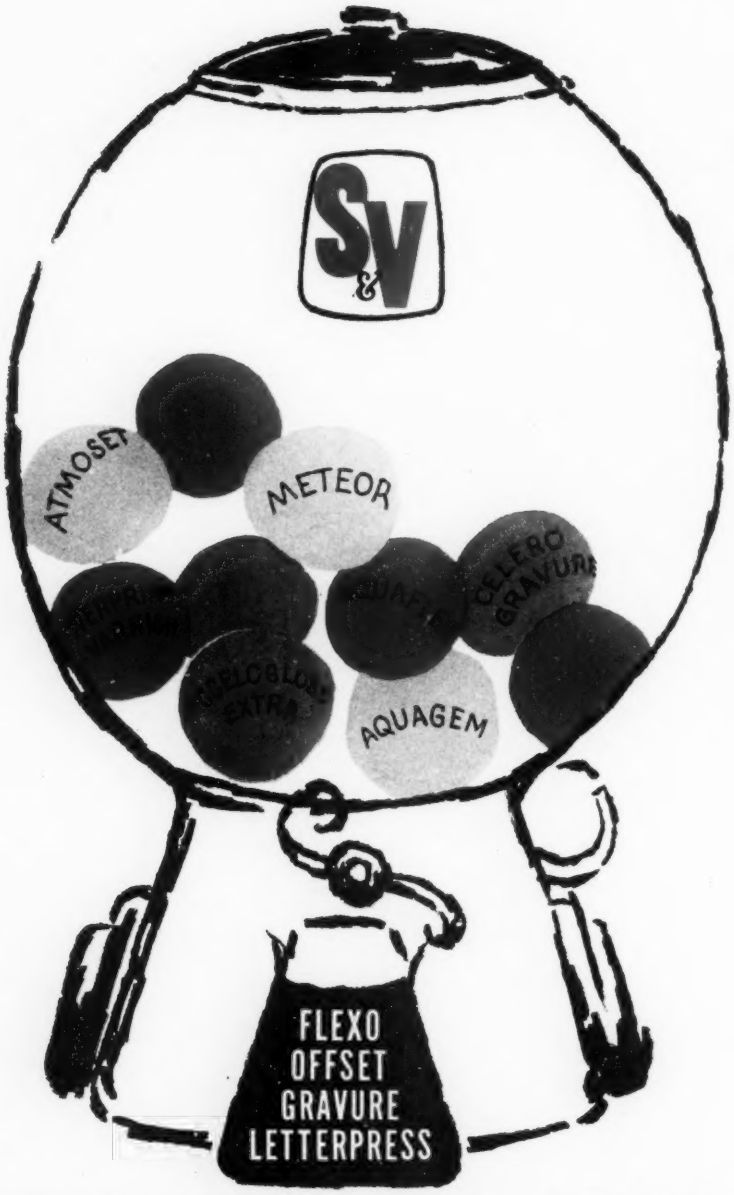
For produce marketers and other bulk material packagers currently using paper, jute or low density polyethylene bags, metal or fiber drums, and the like . . . new TR-101 bag can mean more efficient packaging. They offer excellent protection against product loss from handling or moisture spoilage . . . attractive packaging with colored or translucent film . . . and reduced freight costs. TR-101 film is also easy to seal with automatic or hand sealing equipment now available.

* MARLEX is a trademark for Phillips family of olefin polymers.

For more information, see your package supplier . . . or contact us.

PHILLIPS CHEMICAL COMPANY
Bartlesville, Oklahoma
A subsidiary of Phillips Petroleum Company

PHILLIPS 66 MARLEX PLASTICS



LOW COST

IMMEDIATE DELIVERY

SERVICE

SATISFACTION

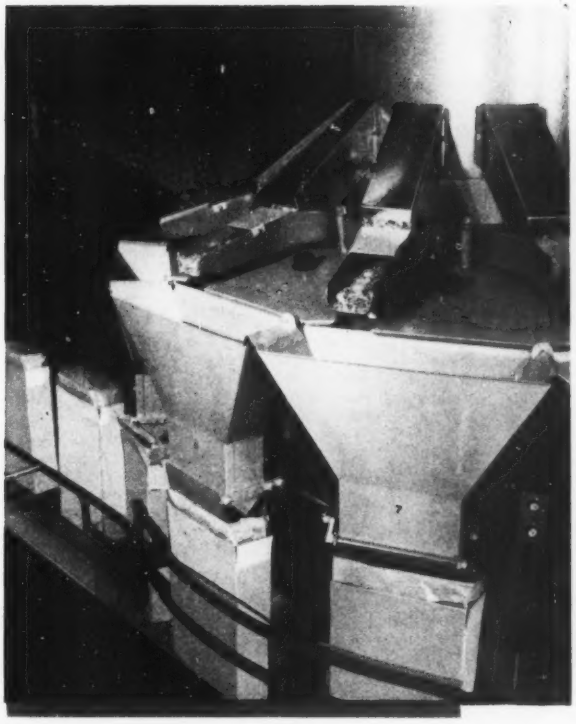
INKS FOR CORRUGATED AND FOLDING CARTONS

Lower cost per impression, superior printability, and service when you want it, are the reasons S&V inks are favored in this field. Experience, know-how, and product development, have made S&V first choice of printers everywhere. If you demand particular satisfaction—rely on S&V and you'll find it easier to get more.

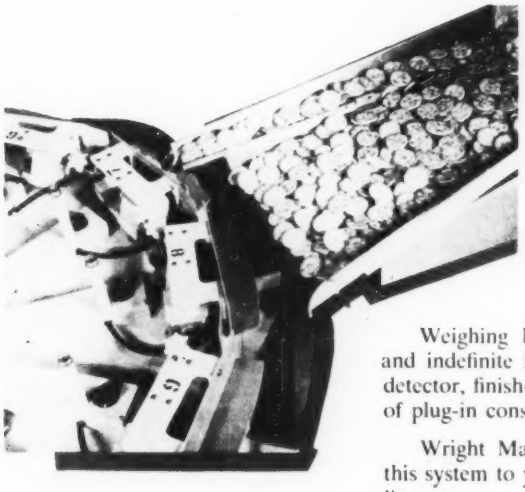
METEOR—moisture set letterpress inks
ATMOSET—water type letterpress inks
ACCELOGLOSS EXTRA—quick-set offset inks
AQUAGEM—water type flexo inks (corrugated liner board)
AQUAFLEX—water type flexo inks (paper and paperboard)
CELERO—gravure inks
OVERPRINT VARNISHES—for every requirement

SINCLAIR and VALENTINE CO., 611 W. 129th ST., NEW YORK 27, N. Y.
PRINTING INK DIVISION • AMERICAN-MARIETTA COMPANY

WRIGHT NT Weigher



Rotary net weigher surpasses all other machines for packaging in cartons the total output of a continuous production process.



Dry cereals, crackers, and similar products can now be packaged more accurately at higher speeds with the Wright NT Weigher.

This system consists of (1) straight line carton conveyor, (2) controlled bulk feeder, and (3) rotating turret with 12 electronic weighing heads, each having a finish-fill feeder and bucket. *One attendant can monitor several systems.*

Weighing heads are transistorized for compactness, reliability, and indefinite life. Each weighing head contains its own complete detector, finish-fill feed relay, and rectifier, with all components being of plug-in construction for quick servicing.

Wright Machinery Company engineers are available to custom this system to your particular requirements. Update your packaging line now.

Packaging Machinery Since 1893

MP

WRIGHT MACHINERY COMPANY

MAIL THIS COUPON FOR COMPLETE INFORMATION

DIVISION OF SPERRY RAND CORPORATION ***DURHAM, NORTH CAROLINA***

Gentlemen: Please send me technical details on your new Wright NT Weigher.

NAME.....

COMPANY.....

ADDRESS.....

PRODUCTS.....

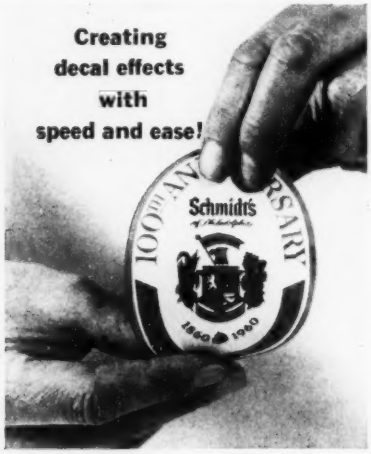
More effective labeling and tagging!

Time was when most labels and tags were considered routine printing jobs. Those days are gone forever . . . The growth of self-service consumer buying has made top management realize the importance of tags and labels as selling tools at the point-of-sale . . . and increased the responsibility of the men who buy them.

Today, tag and label buyers look beyond first cost to the job to be done. They look for tagging and labeling techniques that increase point-of-sale effectiveness, meet difficult specifications or reduce over-all costs.

Naturally, many of these value-minded buyers look first to Dennison . . . originator of more new labeling and tagging techniques than any other single source. A few examples of problem-solving teamwork between buyers and Dennison are briefly reviewed here.

Creating decal effects with speed and ease!



Beer and safety razor blades have little in common. Yet, both have profited from a labeling technique that speeds and simplifies decoration.

Schmidt's of Philadelphia celebrated its 100th anniversary as a brewer in 1960 . . . with a Dennison split-top pressure-sensitive label playing a major role. Printed in three colors on transparent acetate and gummed with permanent Dennison PRES-a-ply® adhesive, it simulated a decal in appearance and clinging power. But, how different in application ease. No soaking in water. No sliding into position. Just a zip of its paper backing . . . a pat of the fingers . . . and there it was on an automobile or truck window. All of Schmidt's employees and distributors participated.

Gillette used the same labeling technique to redecorate thousands of counter cases when the Super Blue Blade hit the market with history-making impact in 1960. This Dennison PRES-a-ply label was printed in red, white and blue on transparent acetate to match the "price" spots already silk-screened on the glass cover of Gillette's full-line display case. Neatly and securely applied in seconds by finger-tip pressure, it saved time and bother for Gillette salesmen as they made their pre-promotion rounds.

Other users of this PRES-a-ply labeling technique find it the quickest, easiest way to add new prices, premium offers and other promotional or variable information to existing packages or displays. High-speed Dennison PRES-a-ply label dispensers keep application costs amazingly low.

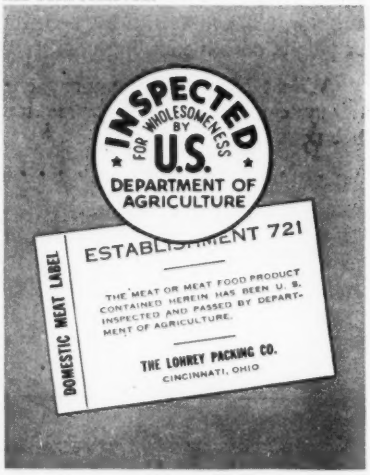
Giving "Easy on" labels extra "Stay on" power!

Few users of labels must meet such demanding specifications as meat processors. For, the US Department of Agriculture, a strict task master, insists on meat products being permanently labeled according to its regulations for consumer protection.

Cryovac film packaging of poultry, for example, calls for the application of a USDA inspection label after the film has been shrunk tightly around the bird in boiling water. The labeled package is then subjected to hours in a deep freeze. Yet, the label must remain 100% tamper-proof. For a Tennessee processor, Dennison supplied a pressure-sensitive label with such permanent adhesion that it cannot be removed without detection. To the customer's delight, the USDA inspector gave his complete approval not only for use on Cryovac film but also on waxed paper overwraps and waxed board boxes.

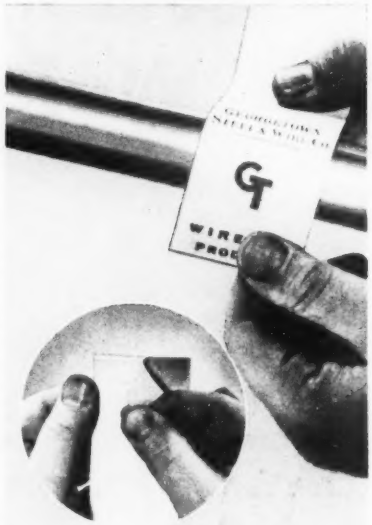
This same Dennison PRES-a-ply labeling technique is also bringing The Lohrey Packing Co. of Cincinnati and other federally inspected meat packers the benefits of strong adhesion. USDA regulations specify the labeling of stainless steel trucks and containers for meat and meat products. Each time a truck or container is emptied, it must be thoroughly steam-cleaned before re-use. Previous labels washed off after each use and often clogged drains, causing costly plumbing bills.

Dennison solved the problem by supplying PRES-a-ply labels with *an adhesive so strong that even steam cleaning could not take it off!* Printed on water-proof stock with grease-proof ink and over-varnished, these labels survive *40 washings!* The Lohrey Packing Co. no longer has to worry about continually reordering and applying labels to their containers. A big headache has been removed.


INSPECTED FOR WHOLESOMENESS BY U.S. DEPARTMENT OF AGRICULTURE
ESTABLISHMENT 721
DOMESTIC MEAT LABEL
THE MEAT OR MEAT FOOD PRODUCT CONTAINED HEREIN HAS BEEN U. S. INSPECTED AND PASSED BY DEPARTMENT OF AGRICULTURE.
THE LOHREY PACKING CO.
CINCINNATI, OHIO

If you need labels that will stay on through steam cleaning, freezing or any other harsh environment — you need permanent PRES-a-ply.

New stringless technique slashes tagging costs!



A stripe of self-sticking adhesive on the back of the tag is now replacing the traditional string or wire in many cases.

This new tagging technique not only reduces attaching costs but also brings the benefits of tagging to products formerly considered impossible, impractical or difficult to tag.

With the self-sticking stripe on one end, as on the back of the Georgetown Steel & Wire Co. tag, you have a new wrap-around technique. It is now increasing the point-of-purchase appeal of such widely varied products as tools, home appliances, luggage and furniture. Other users apply these tags directly to doors, windows, lumber, trunks, tires, windshields and toys.

In-plant applications of this new technique employ couponed system tags for production, piece-work and inventory control.

NEW FACT FOLDER!

If you're responsible for getting more sales impact per dollar out of tags and labels or reducing over-all labeling and tagging costs, this free fact folder will prove invaluable to you. It describes techniques and shows samples that are now increasing sales and profits for some of America's most successful marketers. For your free copy, write directly to Dennison Mfg. Co., Dept.

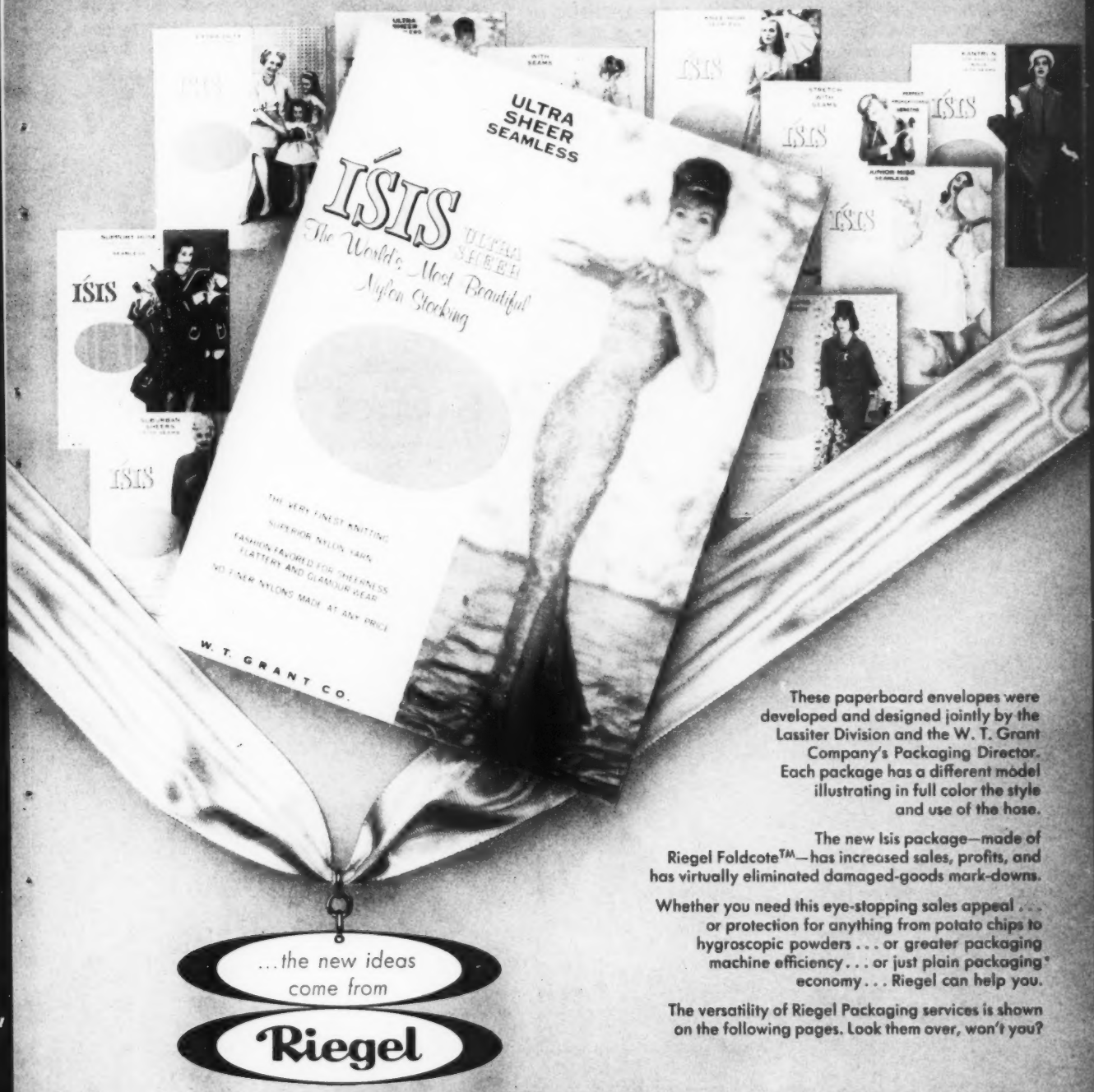
Dennison

Helping you compete more effectively

FRAMINGHAM, MASSACHUSETTS

Riegel

Creative Climate for Tomorrow's Packaging



These paperboard envelopes were developed and designed jointly by the Lassiter Division and the W. T. Grant Company's Packaging Director. Each package has a different model illustrating in full color the style and use of the hose.

The new Isis package—made of Riegel Foldcote™—has increased sales, profits, and has virtually eliminated damaged-goods mark-downs.

Whether you need this eye-stopping sales appeal . . . or protection for anything from potato chips to hygroscopic powders . . . or greater packaging machine efficiency . . . or just plain packaging economy . . . Riegel can help you.

The versatility of Riegel Packaging services is shown on the following pages. Look them over, won't you?

. . . the new ideas come from

Riegel

RIEGEL PAPER CORPORATION, 260 MADISON AVENUE, NEW YORK 16, NEW YORK

Specialist in the packaging of foods, drugs, and soft goods

Flexible packaging . . . carton board . . . folding cartons . . . carton liners

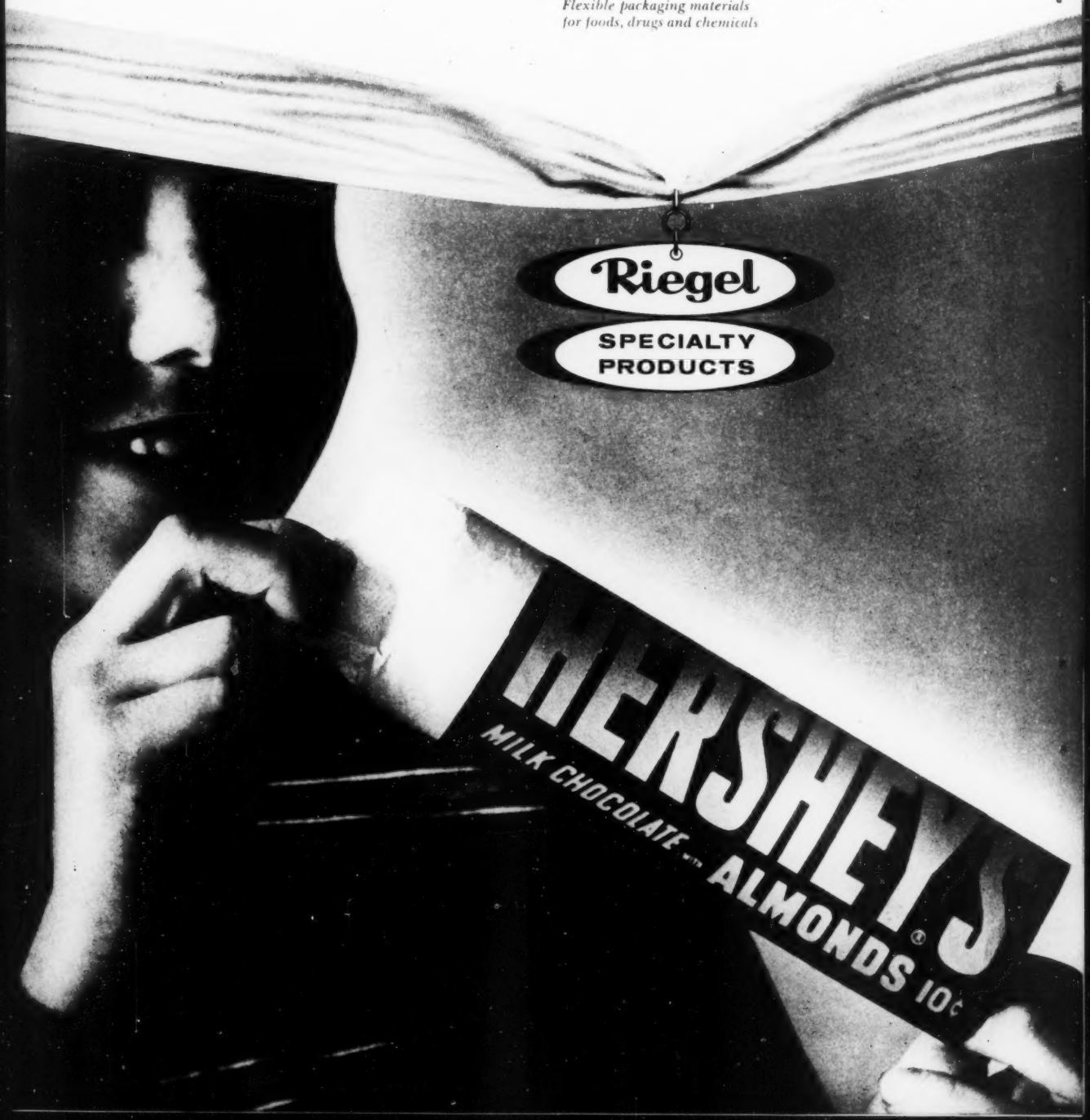
Hershey keeps promise of good taste with a special Riegel inner wrap

A special Riegel glassine helps Hershey bars keep that clean look and appetizing taste.

Always good, always fresh . . . that's the success story of the Hershey bar. One reason is the bar's innerwrap of a special Riegel glassine. It protects the chocolate . . . and its crisp whiteness adds to the anticipation of eating pleasure.

Riegel packaging materials are a tradition in candy . . . and in many other industries. Call on us for help in finding just the right paper, film, foil, or combination package, for your product. We've a flair for thinking of it as something special. Write today . . . for the new ideas come from Riegel.

Specialty Products Division
RIEGEL PAPER CORP., 260 Madison Ave., NYC 16
Flexible packaging materials
for foods, drugs and chemicals



Belk Stores build sales with unified packaging... designed and produced by Lassiter

Belk Stores and Lassiter teamed to coordinate and unify design of 90 soft-goods packages. Result: stronger store-brand identity, improved display, better inventory control . . . and higher sales per store.

Whether you're interested in men's, boys', women's, girls' or infants' soft-goods — or all five lines — you can profit from a Lassiter packaging review. As the leading specialist in soft-goods packaging, we understand both sales and production problems and we know how to create packages that promote sales and maintain your production efficiency.

The Lassiter kind of *practical* creative packaging know-how can help you. May we lay the world of design at your feet? Write today.

Lassiter Division
RIEGEL PAPER CORP., 350 Fifth Ave., NYC 1 • Charlotte 4, N.C.
Specialists in soft-goods packaging. Designers and producers of film, foil, paper and paperboard packaging, inserts, riders, labels, bands and tags.

Mazola . . . another leading product that now uses Riegel Foldcote ™

Rigid, smooth-surfaced Riegel Foldcote is the base for this foil-laminated, register-embossed Mazola package. Carton gravure-printed and produced by Reynolds Metals Co.

Here is another example of the versatility and usefulness of Foldcote. As the strong base in this beautifully designed carton, its outstanding rigidity and uniformity provide durable embossing that really stands out . . . adds sales appeal.

Super-white, super-smooth, super-strong...Foldcote makes a rugged carton with a clean bright look. Foldcote is one of our Carolina solid bleached boards, outstanding for performance and printability. Ask for samples. Export inquiries invited. Write today . . . the new ideas come from Riegel.

Carolina Division
RIEGEL PAPER CORP., 260 Madison Ave., NYC 16
"Foldcote" machine-coated bleached boards
"Albacel" and "Astracel" pulps

Kraft Velveeta and Riegel . . .
quality cartons for a quality product

Kraft Foods' Velveeta is among the many fine products now going to market in Riegel cartons. These are three-color lithography.

Both superior design and high-volume production are essential to carton users. In this case, Kraft turned to Riegel for volume. Riegel's modern plants and equipment, plus personalized attention and on-time deliveries assure all volume users that their demands will be met.

Let Riegel's sales-ahead folding carton service help you. Plants both North and South offer award winning design services plus full choice of printing processes, coatings and finishes. You'll find a talk beneficial . . . for the new ideas come from Riegel.

Folding Carton Sales
RIEGEL PAPER CORP., 260 Madison Ave., NYC 16
Folding Cartons of every description.
Counter display cartons. Egg cartons.

BARTELT

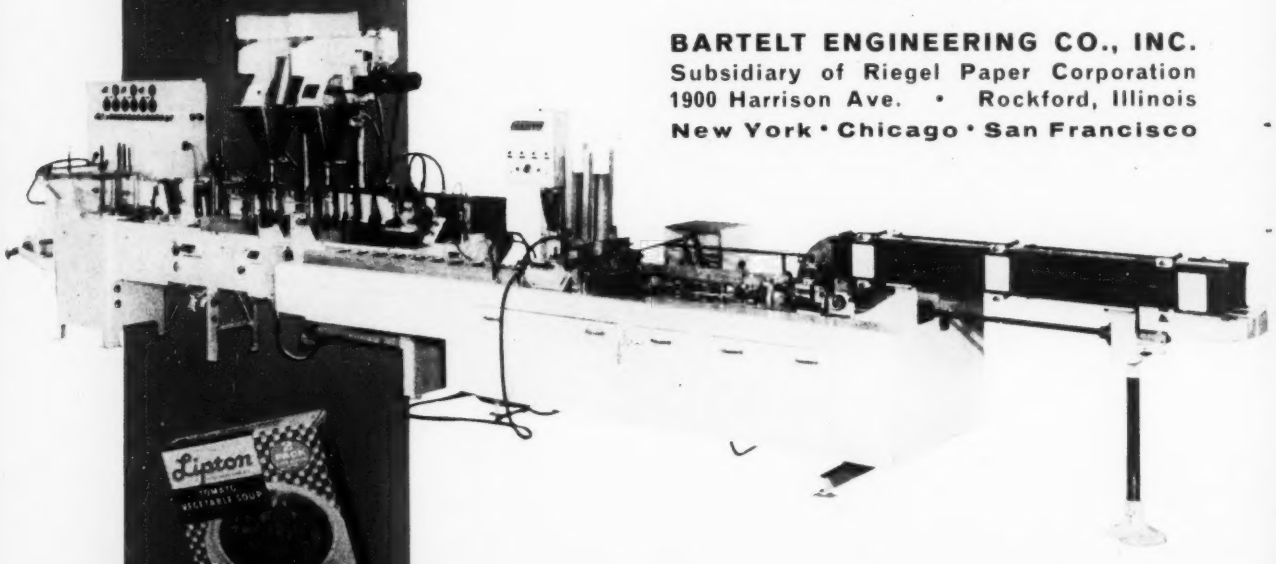
packaging machinery is on the job for...

Lipton

Lipton Soups . . . family favorites, because of their savory home-cooked taste, the new mix way . . . go to market protected by packages of the highest standards . . . packages fabricated automatically by Bartelt Packaging Production Lines.

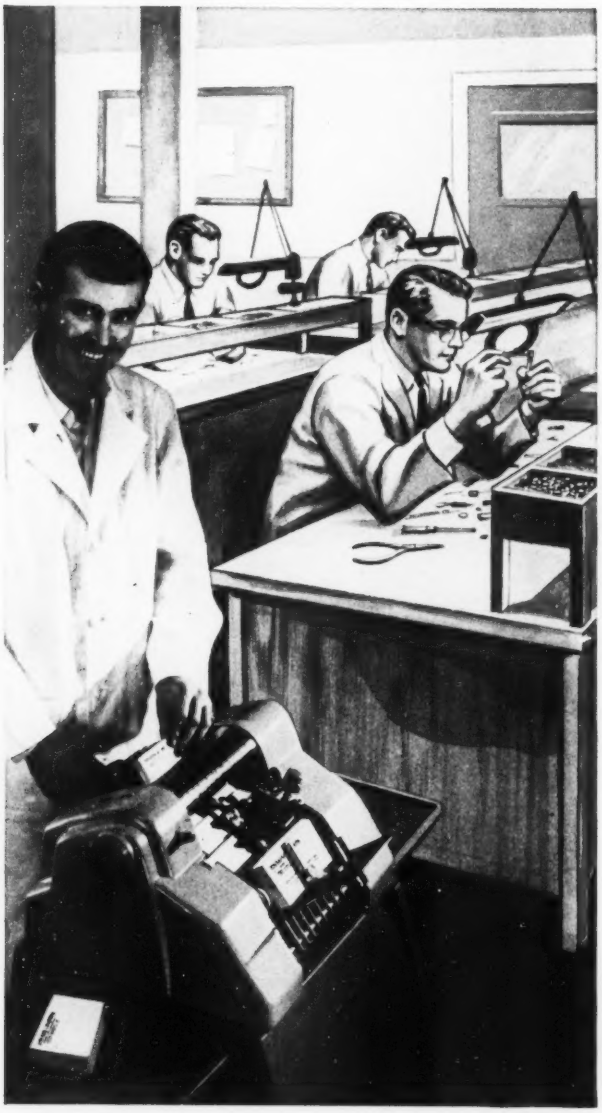
Bartelt has specialized in custom designed packaging machinery . . . and only packaging machinery, for more than a decade. There is no substitute for creative engineering . . . based on solid experience . . . when only the best is good enough.

BARTELT ENGINEERING CO., INC.
Subsidiary of Riegel Paper Corporation
1900 Harrison Ave. • Rockford, Illinois
New York • Chicago • San Francisco



Product specifications

imprinted as needed, quickly & cheaply–



A change of specifications, ingredients, or price—can turn thousands of pre-printed wrappers, labels, tags or cards into scrap paper. You can prevent wastes by imprinting packaging materials, as they are needed, with a Tickometer. And also cut packaging inventories, and printing costs. Thousands of companies have!

- The Tickometer can imprint weight, size, color, grade, quantity, contents, price or a code—on labels, bags, wrappers, light cartons, or tags—from 400 to 1,000 a minute. Packaging can be imprinted for current production.
- The Tickometer has an impression surface of 2-3/16 by 7/8 inches, gives good register, prints from type, electros, or rubber mats. Feeds and stacks automatically, is easy to use. Takes light card stock and most weights and finishes of paper, in sizes up to 15 by 15 inches.
- It can also count eight times as fast as an experienced manual worker – coupons, checks, sales slips, orders, forms, tags, etc. It's accurate enough so banks use it to count currency. With attachments, it can sign or endorse checks.
- You can buy it or rent it. Pitney-Bowes service is always immediately available from 320 points. Call the nearest PB office for a demonstration. Or send for free illustrated booklet and case studies.

Model 4800 Package Imprinter

Imprints folding cartons, containers, bags, etc. up to 7,500 an hour, as needed—reducing inventories and waste. No tools required, can be operated by anybody. Ask for a demonstration, or send coupon.

Pitney-Bowes

TICKOMETER

Imprinting & Counting Machine

Made by the originator of the postage meter . . . 148 offices in U. S. and Canada.

PITNEY-BOWES, INC.
4840 Walnut Street
Stamford, Conn.

Send free illustrated booklet and case studies on:
☐ *Tickometer* ☐ *Package Imprinter*

*Name*_____

*Address*_____

Look what's new in liquor packaging

NEW LOOK FOR AN OLD FAVORITE. Not the usual look for a pre-mix cocktail, surely . . . but one that combines both character and a modern feel. While we can't claim this sleek design, we are proud of translating it so cleanly into a package that runs smoothly both on our production lines and on Heublein's filling lines. Sound simple? It was. Experience can help in making most jobs simple.

PACKAGE DESIGN BY METZIG ASSOCIATES, NEW YORK

Armstrong PACKAGING

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER WEDNESDAY EVENING ON CBS-TV

Background for Packaging

Notes, quotes and comments. An editorial feature

Conquest of space has a special meaning for packagers, who are being pressed from several directions to reduce needless cube in packages. Retailers cheer such moves as that of Eastman Kodak, which has redesigned some film packages to cut out wasted air space, and Kimberly-Clark, which has halved the size of some Kleenex boxes, without reducing contents, by compressing the tissues. Hard-pressed chain stores say much more can be done along this line. Packagers save by reduction of freight and storage space. And looming over all is the stepped-up Government campaign against "slack-filled" packages (see *Editorial Memo*, p. 85, this issue).

Long-standing gap in packaging statistics will be filled under joint proposal by Business & Defense Services Administration and Census Bureau, now pending in Washington. A proposed special census of the plastics industry would for the first time cover plastics packaging and shipping containers other than flexible products (which are already covered). It will provide a breakdown of plastic trays, boxes, bottles, jars, vials, drums, tubes, foamed plastics, etc. Proposal awaits only the approval of necessary funds by the Federal Budget Bureau.

Drug industry fights new move by F&DA to require inserts of complete information in every prescription package. Abbott Laboratories, in annual report, calls this an example of unjustified legal burdens on the drug industry, "since the physician rarely sees a package insert and the pharmacist rarely needs it. Both have access to adequate information now." Abbott's report is critical also of new requirements involving food-color additives, testing of samples, labeling and interpretations of the Delaney cancer clause. At a recent seminar, one drug production man said his company would have to change 60% of its labels this year in order to meet the requirements of the new regulation.

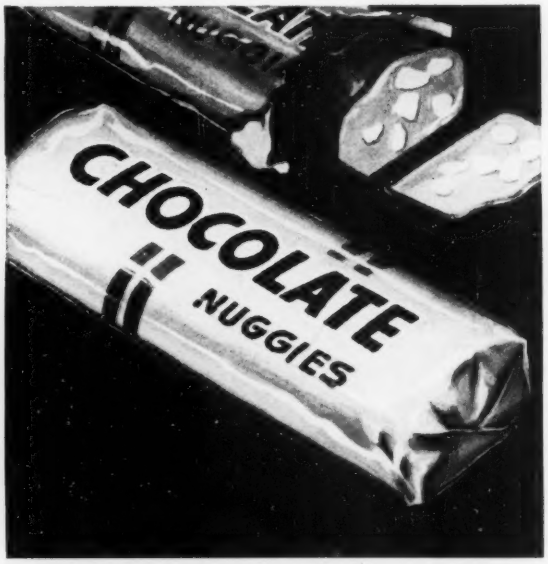
New cellophane code was due to be disclosed by Du Pont at the Packaging Show in Chicago. Eliminating the old gauge system in favor of yield basis, it would place three new numbers before the type designation of film, as: "195 MST-60." The "195" would represent the yield in hundreds of square inches per pound (19,500 sq. in. in this case). This would facilitate the calculation of actual film cost from the standard price per pound. Expectations are that the other companies supplying cellophane film will follow Du Pont's lead.

High hopes for new lightweight tinplate are disclosed in annual report of American Can Co., which predicts commercial use for motor oil and beer in substantial volume this year. Canco discloses that 15 other items packed in the new tinplate are under test in its laboratories and that preliminary results are encouraging. The company calls introduction of the lower-cost tinplate the most significant development in the metal-container field in 1960—a major technological advance "required in the competition among metals in the packaging field." However, Canco reports that one-third of its dollar volume is now in products using materials other than metal and predicts most rapid growth in this area.

Surprising gains in the number of supermarkets ($1-million volume) carrying certain non-food lines are shown in latest figures from Super Market Institute. Between 1958 and 1960, percentage of stores carrying health and beauty aids rose from 98 to 99%; housewares, from 87 to 94%; women's hosiery from 81 to 91%; station- [*Continued on page 42*]

HOW THIS COCOA BEAN GOES TO MARKET

3 **AVISTRAP® CORD STRAPPING*** palletizes bags for shipment. Avistrap outperforms metal strapping—at lower cost—in many applications. Has no sharp, cutting edges. Does not lash out if broken.
(**Patents pending*)

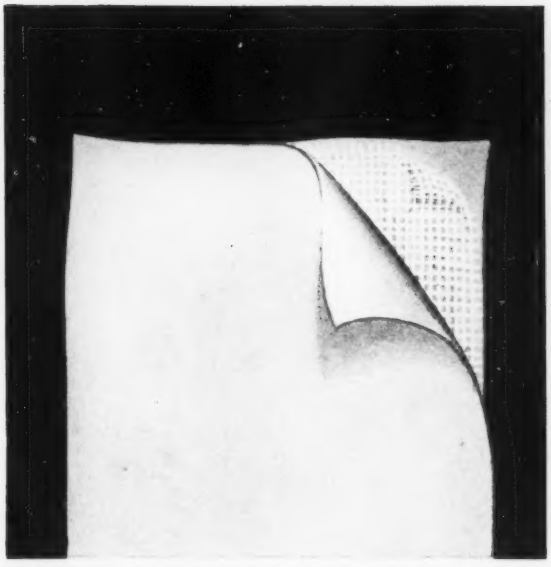


4 **AVISCO CELLOPHANE WRAP** seals in freshness, flavor and aroma—adds sales appeal through superb printing. Avisco cellophane is also unmatched for trouble-free performance on packaging machines.

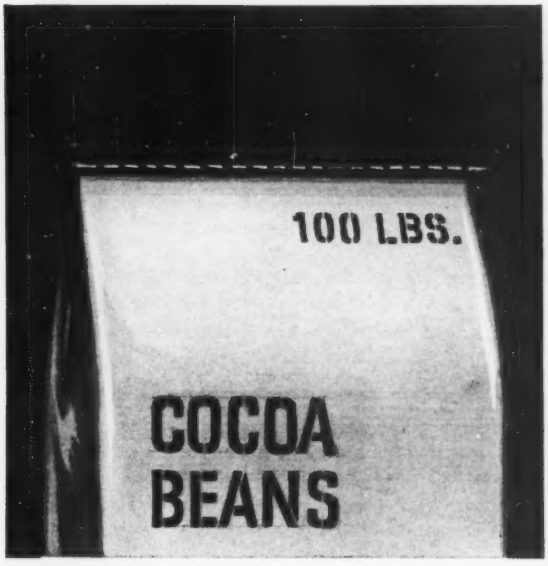
These are just a few examples showing how Avisco fibers and films serve a wide variety of packaging needs. Tell us about your packaging requirements or problems. We'll be happy to help.

AVISCO®

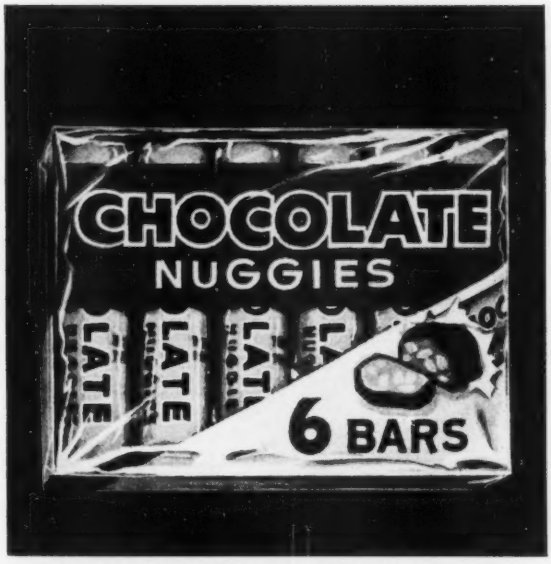
AMERICAN VISCOSE CORPORATION, PACKAGING DEVELOPMENT SERVICE



1 **BAG REINFORCED WITH AVISCO RAYON SCRIM** can be used to ship the cocoa beans. Scrim is made of Avisco Rayflex® filament and is laminated with the paper to provide better performance at low cost.



2 **AVISCO RAYON BAG STITCHING TWINE** is used as a sack closure. It yields up to 30% greater yardage per dollar; offers greater strength and trouble-free sewing on bag stitching machines.



5 **AVISCO CELLOPHANE MULTI-PACK** shows contents; increases sales; simplifies stocking and checkout in markets; offers shoppers real economy. Multipacks of 2 or more units are used on many products.

6 **TAPE REINFORCED WITH AVISCO RAYON** seals the carton. Avisco Rayflex® filament is the best choice for packaging tape reinforcement. It adds strength, tear resistance and flexibility.

PACKAGING MATERIALS

AVISCO

1617 PENNSYLVANIA BOULEVARD, PHILADELPHIA 3, PENNSYLVANIA

Continued from page 39

ery, from 74 to 82%; children's books, from 74 to 82%. There were, however, significant decreases in hardware (down from 58 to 45%), men's and children's socks, and underwear.

Idea of the month: Packaging plants are snapping up offer by Paramount Paper Products Co. of free pressure-sensitive labels to be affixed to packaging machines, which say simply: "The replacement cost of this machine is $———." Companies which have applied such labels report noticeable results in terms of fewer repairs and more careful handling of machines by workers impressed with the amount of investment represented.

Renewed activity in vacuum-coating of aluminum on paper is indicated by announcement of Nicolet Paper Corp., a Milprint subsidiary that is now producing aluminum-coated glassine in continuous mill-roll lengths. The material, which gives the appearance of foil with a coating only 3½ millionths of an inch thick, is expected to find use in wraps for ice-cream bars, candy bars, labels and other products at "an important reduction in cost" over conventional 0.00035 foil-tissue or foil-sulphite laminations. Cost of amortizing expensive vacuum-deposition equipment has been the stumbling block in this development so far.

The switch to plastics requires caution, particularly where food products are concerned. A Long Island candy company recently made front-page headlines in New York-area newspapers when it was reported that 240 tons of candy had to be destroyed as contaminated. Behind the story: The company had adopted a thermoformed polystyrene tray as part of the package, but had not checked as to whether non-migrating and non-toxic plasticizers were used. The company became suspicious when the packaged product developed an odor, checked with an independent laboratory and, on its recommendation, destroyed $150,000 worth of product. Proper specification of the polystyrene would have avoided this loss.

Common market for North America? It would have tremendous implications for the packaging field in the freer movement of products, supplies and equipment between Canada and the United States. Such a move has been seriously suggested by Neil McElroy, chairman of the board of Procter & Gamble and former U. S. Secretary of Defense, in a speech to the Toronto Board of Trade. Meanwhile, there is word of another common market (COMECON) being put together by Russia and its seven Eastern Europe satellites, with a combined population of 311 million.

One-shot packaging has only just begun to meet the opportunities and demands of modern living, say researchers for *Walter Landor*, West Coast design organization. Cited as still largely unexploited in this respect are cosmetics, toiletries, cocktails and perfumes. The tremendous rise in popularity of the coin vending machine—essentially a one-shot package dispenser—is mentioned as an indication of the marketing opportunities existing in this type of packaging.

Glass makers fight to hold their gains in the one-trip soft-drink field, in the face of recent reluctant price increases. At least three major producers of no-return bottles—Owens-Illinois, Thatcher and Hazel-Atlas—are reported to be offering bottlers their own program of co-op ad allowances of up to 45 cents per gross for advertising, sampling and point-of-purchase promotion, meeting similar allowances by can makers. These companies reportedly couldn't wait for an industry-wide promotional program being developed by Glass Container Mfrs. Institute.

PACKAGING: How to display and protect at half the cost

Dramatize your product in blister packs of strong, crystal clear Polyflex* while trimming your bill for transparent plastic material by 50%. This dimensionally stable polystyrene does not distort, twist, warp or embrittle. Call the Plax office for details.

*Polyflex is Plax's registered trademark for its biaxially oriented polystyrene film and sheet

PLAX

PLAX CORPORATION, HARTFORD, CONN. • In Canada, Plax Canada Ltd., Toronto.

PLAX GIVES A PACKAGE A PLUS

Here's Take-Your-Choice Versatility

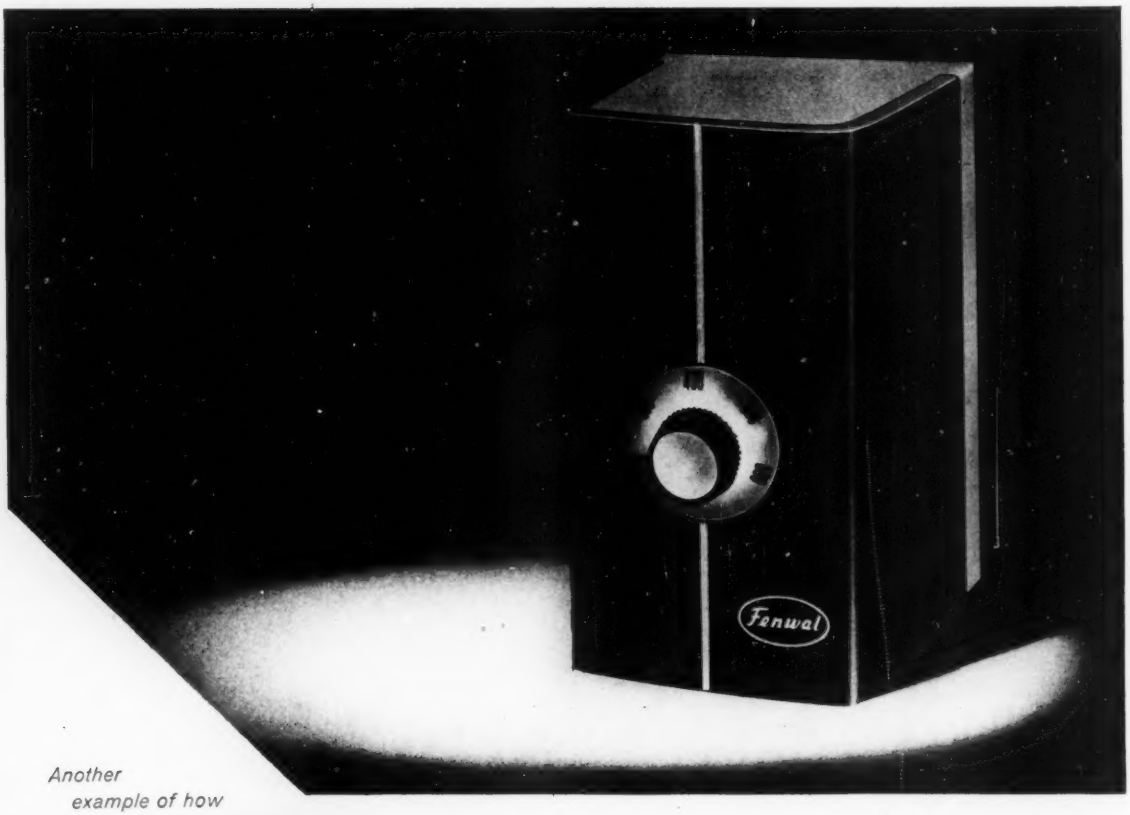
with the Multi-option Fenwal 536 Temperature Controller

It's so *precise* and yet so *easily adaptable* to an almost endless variety of temperature control applications, you become all but convinced that the transistorized Model 536 was engineered with only your needs in mind!

From its multi-option printed circuit board to its numerous interchangeable components, the Model 536 Temperature Controller spells *versatility*. ON/OFF or proportioning control . . . dial for set point adjustment mounted externally or internally . . . expanded scales for precise temperature adjustment — the 536 offers all these advantages! Five standard temperature ranges from −50 to +600°F . . . separate potentiometer with graduated dial and knob for remote temperature adjustment . . . capacity of 10 amp/110 VAC and 5 amp/230 VAC . . . these choices are also available to you. *And you pay only for the options you need!*

The 536 is sensitive to within 0.1F°. And if you wish to build a multi-point control and indication system — either gradually or all at one given time — you simply combine the Fenwal Model 580 Temperature Indicator with as many 536 Controllers as you require. Thermistor sensors enable fast response and ordinary copper lead wire may be used for connections. Removable interior of the Model 536 allows easy, safe installation and the instruments are smartly styled to perfectly complement modern industrial machines and interiors.

Find out more about how the precise Model 536 Temperature Controller can be adapted to your exact needs by writing to FENWAL INCORPORATED, 65 Pleasant St., Ashland, Mass. Request Bulletin MC-195.



Another example of how

Fenwal CONTROLS TEMPERATURE . . . PRECISELY

For color packaging that looks good enough to eat...

CROSSETT COATED FOOD BOARD

Gown by Oleg Cassini

Your product's picture will have true appetite appeal when printed on new Crossett Coated Food Board. Multi-stage coating on our cylinder machine is the reason. Superb printing surface is achieved by the building up of coating materials in a series of applications that results in uniform coverage.

Smooth, strong and dazzling white, Crossett Coated Food Board will help you get fine printing, free of mottle, even on your most intricate jobs.

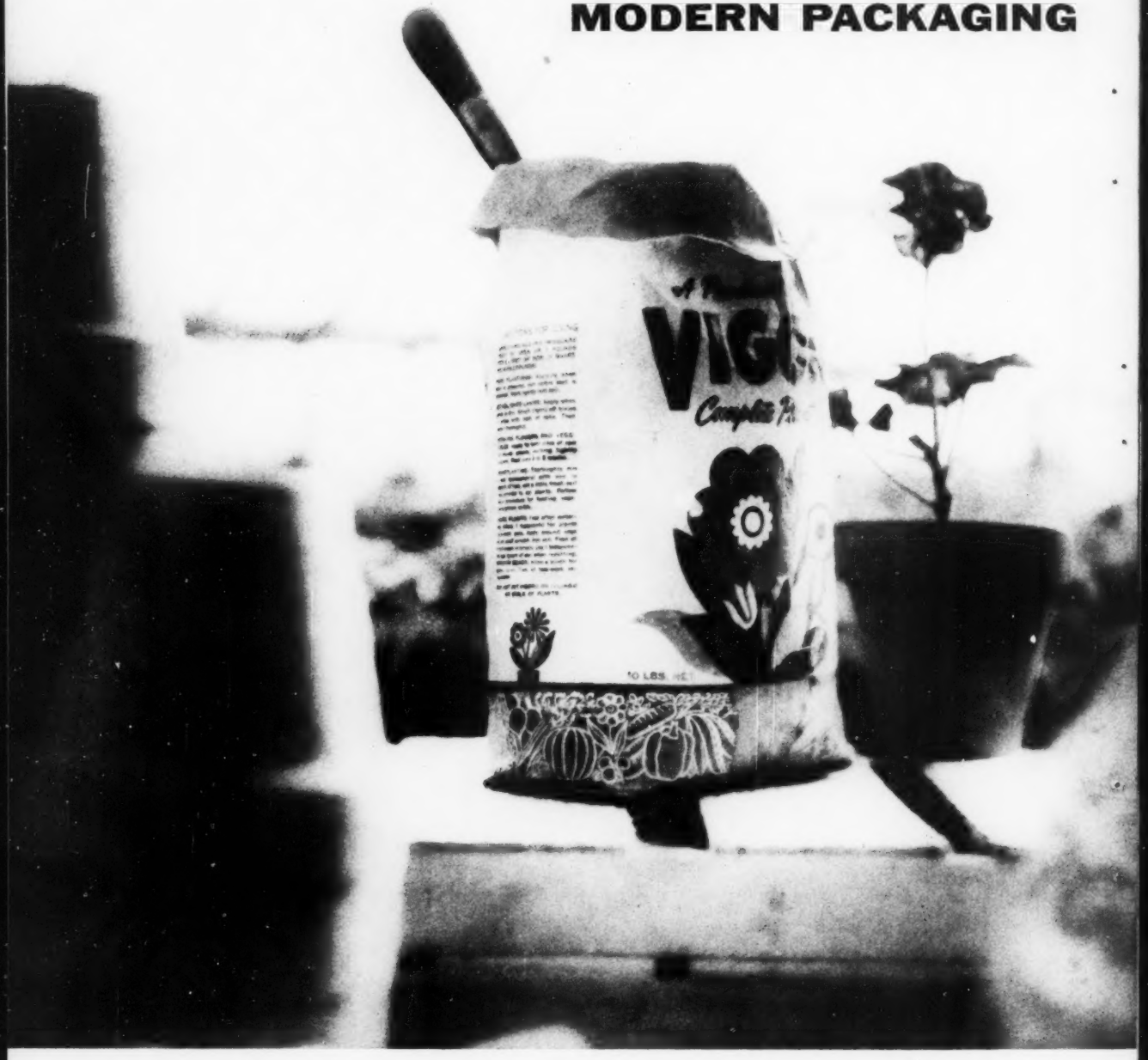
And of course you can get the same high quality Crossett Food Board—uncoated.

CROSSETT PAPER MILLS

A DIVISION OF THE CROSSETT COMPANY, CROSSETT, ARKANSAS.
MAKERS OF PAPER, LUMBER, CHARCOAL AND CHEMICALS—ALL FROM MANAGED FORESTS.

most products are packaged...and most important packagers read

MODERN PACKAGING



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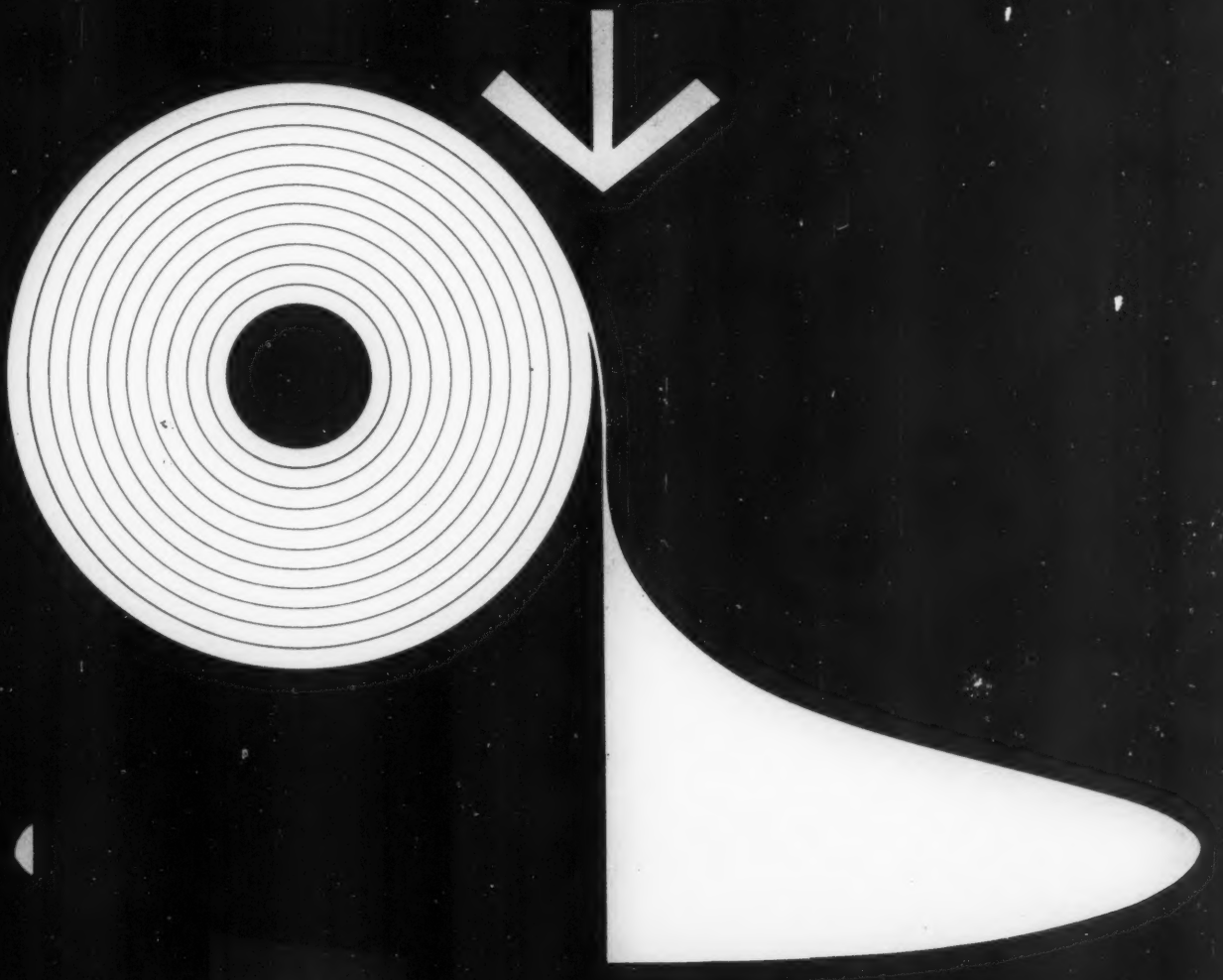
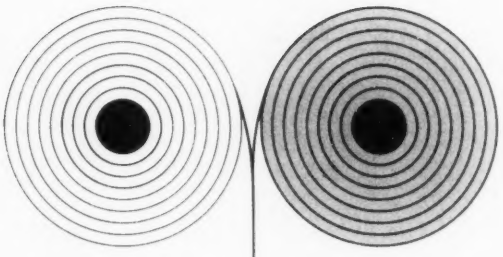
Now you can buy foil laminations direct...



from ALCOA



Alcoa now controls quality . . . from ingot . . . to laminations . . . at one location. Alcoa's new $1.5 million expansion of facilities in Davenport, Iowa, gives you a new, direct, major source for aluminum foil laminations.

At Davenport, Alcoa produces foil laminates to rigid standards of quality and smoothness. This expansion, backed by Alcoa's famed research and development properties, allows us to service your foil laminate requirements in combination with paper, wax, paperboard and plastic materials.

If color is a graphics consideration, Alcoa can supply the basics or give you the complete spectrum in matching your color specifications.

ALCOA ALUMINUM

FOIL LAMINATIONS

For more complete and profitable information, please mail this coupon.

ALUMINUM COMPANY OF AMERICA
1664-E Alcoa Building, Pittsburgh 19, Pa.

I am interested in more information about your new foil laminating facilities.

Name

Company

Address

City Zone State

ALCOA SALES OFFICES

AKRON 8, OHIO....506 Akron Savings & Loan Bldg.
ALBANY 10, N.Y....255 Lark St.
ALLENTOWN, PA....1132 Hamilton St.
ATLANTA 9, GA....Alcoa Bldg., 1615 Peachtree St.
BALTIMORE 2, MD....1007 Commercial Credit Bldg.
BIRMINGHAM 13, ALA....P.O. Box 7424A
BOISE, IDAHO....1220 Vista Ave.
BOSTON 16, MASS....20 Providence St., Park Square
BRIDGEPORT 1, CONN....Atlantic St.
BUFFALO (TONAWANDA), N.Y....2427 Sheridan Dr.
CHARLOTTE 2, N.C....1000 Wachovia Bank Bldg.
CHATTANOOGA 2, TENN....1205 Volunteer Bldg.
CHICAGO 11, ILL....520 North Michigan Ave.
CINCINNATI 6, OHIO....Alcoa Bldg., 2331 Victory Parkway
CLEVELAND 13, OHIO....1450 Terminal Tower
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DAVENPORT, IOWA....601 Brady St.
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KANSAS CITY 5, MO....2300 Power & Light Bldg.
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LUBBOCK, TEXAS....203 Field Bldg.
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SAN DIEGO 3, CALIF....2962 Fifth Ave.
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SEATTLE 1, WASH....1411 Fourth Ave. Bldg.
SOUTH BEND 1, IND....805 J.M.S. Bldg.
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SYRACUSE 1, N.Y....731 James St.
TAMPA 9, FLA....4302 Henderson Blvd.
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WASHINGTON 6, D.C....1200 Ring Bldg.
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YORK, PA....205 Manufacturers Bldg.
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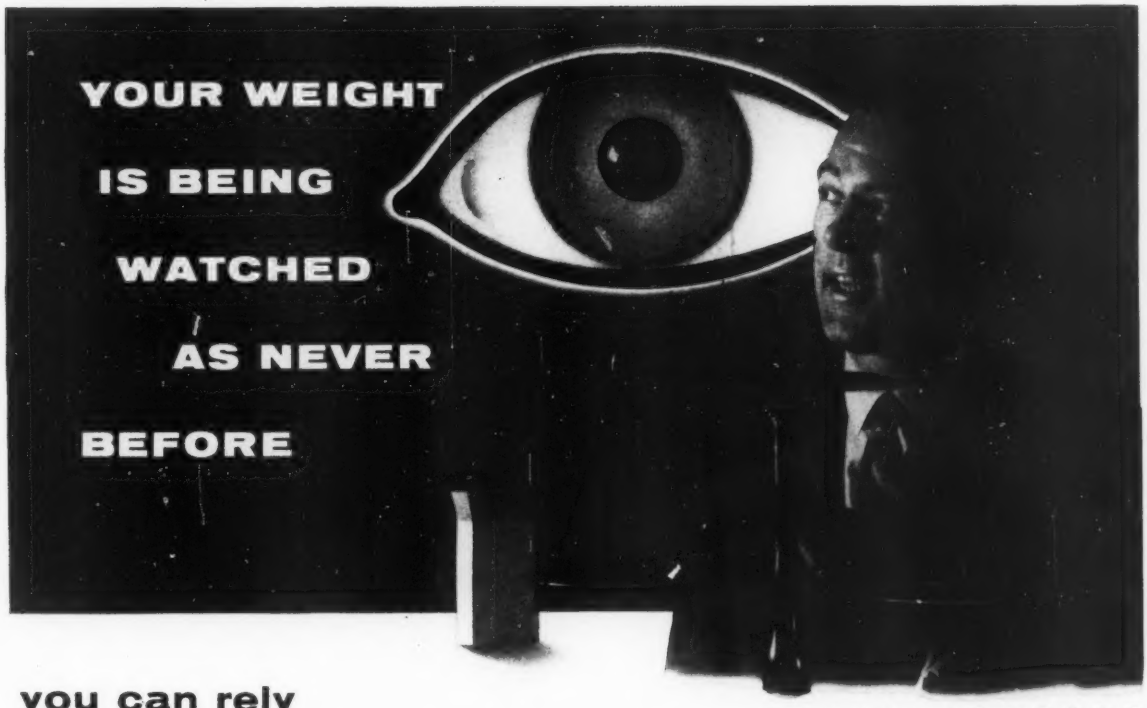
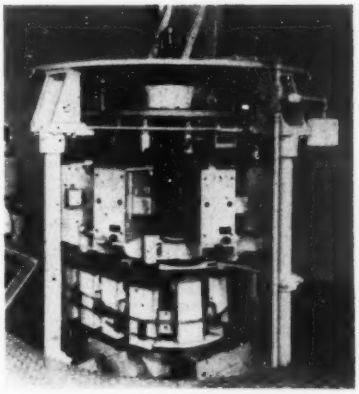
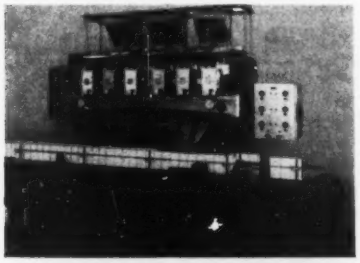


you can rely on the accuracy of Pneumatron, as these companies do

Weight is now a more "critical factor" than ever before with new, more exacting government requirements to be met. This is a growing headache for management executives with something less than modern equipment operating in their plants. But the man with Pneumatron working for him can smile all the while.

Pneumatron is the ultimate in speed and accuracy for net weighing, employing a simple air pressure principle. The weighing mechanism consists primarily of a cantilever assembly and air jet control. Deflection of goods receptacle is detected by air with direct shutter latch—no knife edges to wear or corrode. No delicate trip mechanisms needing frequent adjustment are involved. System is completely responsive to changes in product density. It eliminates continuous check weighing and resetting for variations of density.





Pneumatron is available in 2, 4 and 6-head units with single or dual stream weighing. It is also incorporated in Velocitron—Pneumatic's all-in-one machine for feeding, bottom sealing, filling and top closing. Send for bulletins 122 and 133 for complete details.

- KELLOGGS
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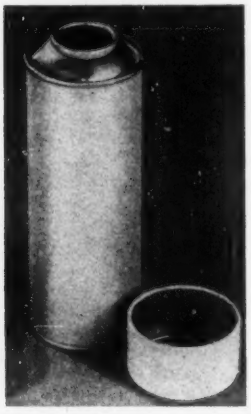
PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Massachusetts. *Also: New York; Chicago; Dallas; Rochester; Rockwell Pneumatic Scale Ltd., London, England.* Agents: *Fred Todt Company at Los Angeles, San Francisco, and Seattle.*

PNEUMATIC** ***Packaging and Bottling Equipment

EQUIPMENT & MATERIALS

Cost-cutting aerosol improvement

New from Continental Can is an aerosol can with a nibbed-dome top that accommodates a single-shell overcap, rather than the conventional double-shell cap. The single-shell cap can save aerosol packagers up to $6 per thousand in closure costs, says the supplier. In the company's new development, the dome top of the aerosol can is impressed with four dimple nibs. When the dome is seamed to the body of the can, the nibs provide a friction lock between the seam of the can and the nibs. This lock is said to hold the single-shell overcap securely in place to protect the valve even under rough handling. The redesigned dome top does not reduce can height or cause filling problems, the supplier notes. The dome may be lacquered inside with protective enamels for special products. Nibbed-dome cans in 202- and 211-diameter size are offered. For additional details, contact the manufacturer. *Continental Can Co., 100 E. 42 St. New York 17.*



Bag-making machine

A bag-making machine that is said to provide economy plus accurate conversion of printed or unprinted material is being offered by Schjeldahl. Called Model 108, the machine is reported to offer versatility of both side-weld and bottom seal, with fast change-over. It can be used for single and multiple web production. An aluminum sealing bar assembly provides constant heat throughout the bar without "peaks" or "valleys," the supplier notes. The 56-in. model can turn out bags from 3 in. square to 54 by 70 in. It also features a slide-action knife for even pressure, a power-driven compensator for continuous unwind with separate automatic adjustable electronic drive, mechanical running length control with variable-speed wide-belt conveyor including adjustable pick-off and corrugating stacker with variable drive, a choice of Teflon or silicone rubber sealing rolls, and an electronic switching system reputedly enabling accurate cut-off repeat with two webs running simultaneously at high speed. More data can be obtained from *G. T. Schjeldahl Co., Northfield, Minn.*

Electronic conveyor carton selector

Atronic offers an electronically controlled conveyor carton selector system for sorting and counting packaged products. The system differentiates among 31 different types of packages on a moving conveyor and automatically sorts and diverts each of them to the proper one of 31 possible destinations. If desired, a number of different packages may be routed to the same destination. The entire operation is said to be accomplished at one setting of the system's toggle-switch control console. The cartons are identified by a code printed on the carton and read photoelectrically. The system also counts and totals the passing cartons and can be used at conveyor speeds up to 200 ft. per minute. Known as Model 415, the system can also be utilized in conjunction with a proportional speed memory system where the output signal is held by memory until the package arrives at its selected diversion point. In operation, the reader is located adjacent to the conveyor line, with plug-in selection modules—one for each code—installed in a remotely located selector panel. By positioning toggle switches in the selection modules, an operator selects the packages to be counted and sorted. The supplier claims that the system is highly flexible, expandable in design and can be adapted to almost any type of conveyor now in existence. *Atronic Products, Inc., West Conshohocken, Pa.*

Faster carton-size change-over

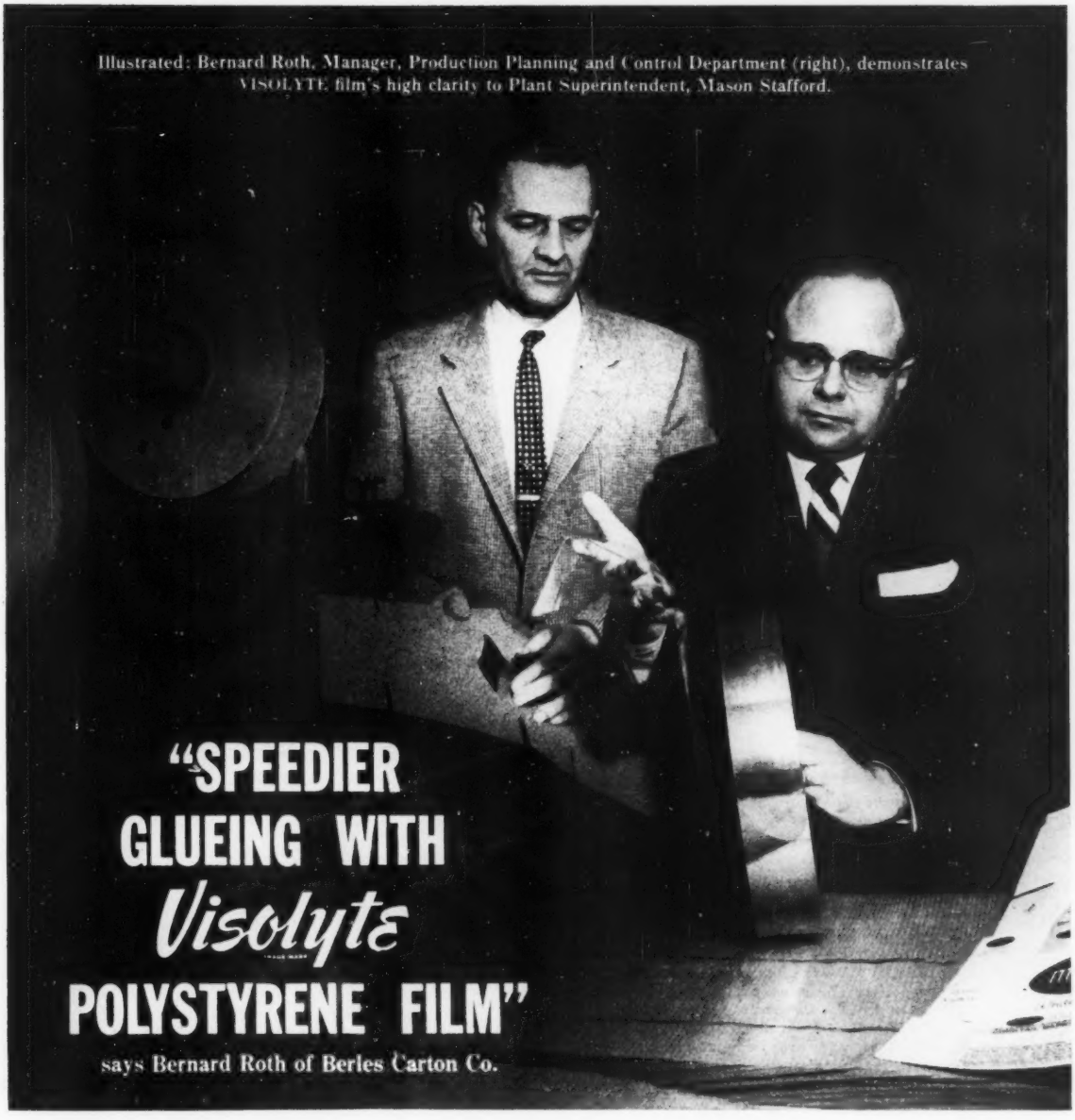
Peters Machinery reports that an improvement of its Model PG carton- and tray-forming machine cuts container-size change-over time from an hour to 5 minutes. Under the new method, says the company, entire assemblies are placed in the forming machine. When size change-over is required, the machine operator loosens hand-turn fasteners and removes the carton-blank magazine, pusher bar, gluing assembly, forming run and forming mandrel—replacing each with entire new assemblies for the specific size of carton or tray desired. Formerly, the supplier points out, assemblies were adjusted on-machine to accommodate new carton or tray sizes. The machine handles carton and tray blanks from 5 to 22 in. long by 3½ to 18 in. wide. The supplier notes that certain blanks outside this range may also be handled. *Peters Machinery Co., 4700 Ravenswood Ave., Chicago 40.*

Film bags unitized for faster packaging

Bemis Bro. has developed a unitized polyethylene bag put-up that reportedly can increase the production rate of semi-automatic loading equipment by up to 10%. Known as Nest-Pak, the put-up consists of 200 polyethylene bags pinioned in alignment by two plastic pegs to a stiff paperboard backing sheet. When this assembly is placed into a machine, individual bags can be pulled free for product insertion. The system is claimed to prevent blocking or fouling in this operation, and is reported to be especially suited for packaging bakery and soft goods that require manual insertion. The supplier claims that experience in West Coast bakeries showed that production was increased and bag rejection due to misalignment was cut 8 to 9%. The bags are ready for use as delivered with no preliminary hand alignment or adjustments. Closures can be made by heat sealing or tying. *Bemis Bro. Bag Co., 408 Pine St., St. Louis 2.*

Plastic trays resist heat or cold

Haveg Industries has formed the Hav-A-Tray Div. to manufacture a new line of disposable thin-wall plastic containers. Reported to be extremely low in cost and to be suitable for frozen-food packaging, the containers are molded from an inert thermosetting plastic. In addition, they are claimed to resist temperatures as high as 475



Illustrated: Bernard Roth, Manager, Production Planning and Control Department (right), demonstrates VISOLYTE film's high clarity to Plant Superintendent, Mason Stafford.

"SPEEDIER GLUEING WITH *Visolyte* POLYSTYRENE FILM"

says Bernard Roth of Berles Carton Co.

"Does a great job of accepting adhesives and drying immediately," says Mr. Roth, "No hold-up for drying time, and the glueing operation is thoroughly dependable. What's more, we like VISOLYTE film for its fine clarity and its easy handling and machinability."

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VISKING COMPANY

DIVISION OF UNION CARBIDE CORPORATION

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deg. F., suggesting application as bake-in containers. The supplier notes also that the plastic tray packages impart no odor or taste to foods during storage or heating and that the materials used have been approved by the Food & Drug Administration. The containers are offered in a variety of colors, with or without molded-in copy or decoration. Additional information is offered by *Hav-A-Tray Div., Haveg Industries, Taunton, Mass.*

Ultrasonic sealing for plastics

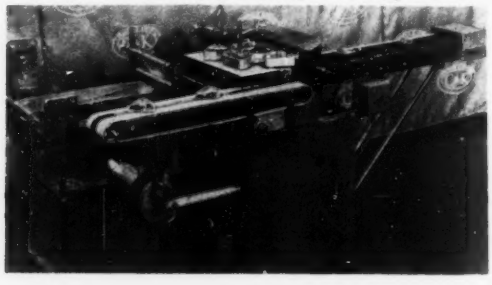
Welding of plastic films and sheets in a virtually heatless manner is now possible with International's new ultrasonic unit that employs sound waves vibrating at 40,000 cycles per second. The new equipment, which resembles a sewing machine in appearance and action, differs from ultrasonic foil welders in that it employs a compression wave that vibrates in the same direction in which the plastic material is traveling. (Ultrasonic welders for foil use shear waves that vibrate in a cross direction.) Operating at 50 ft. per minute with a seal width up to 1/10 in., the machine will handle a variety of plastics from ¾ to 10 mils in thickness and is a prototype for future equipment that will be specifically designed for packaging applications. The machine works by translating electrical current into sound waves through a transducer, then concentrating these vibrations in a pointed mandrel. Advantages are the low level of heat —well below the melting point of most thermoplastics— and the ability of these waves to create a truly welded bond in such films as high-density polyethylene and polyester that are hard to seal with heating techniques or require added heat-seal coatings. For details, contact *International Ultrasonics, Inc., Cranford, N. J.*

High-density polyethylene resins

Celanese Polymer Co. offers a new line of high-density polyethylene resins, to be marketed under the Fortiflex trademark. The resins are claimed to offer greater toughness and processing versatility for a broader range of product applications and markets than conventional high-density polyethylene. Production of the resins is now under way at a new plant near Houston. Among the uses suggested for the new resins are containers for liquids. Market-test applications, says the supplier, indicate that the resins can be converted into plastic products at higher, more economical processing speeds. Among the advantages cited for the new resins are greater resistance to high pressures and temperatures. According to the supplier, bottles can be molded at faster rates, exhibit greater impact resistance, have more uniform wall thickness and a more attractive appearance. *Celanese Polymer Co., Div. Celanese Corp. of America, 180 Madison Ave., New York 16.*

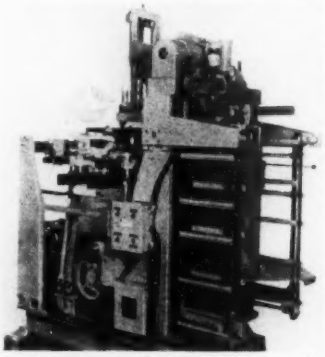
Wrapper for wedge-shape pie cuts

New from Crompton & Knowles is the Model CKW4S (a modified Wrap-King machine), designed for automatic film wrapping of wedge-shaped pie cuts at speeds up to 40 per minute. The unit is reported to duplicate hand-wrapped packages—including a light tack seal of bottom film folds and a product-conforming loose wrap that does not damage soft filled pies—at savings of 40% in material and 75% in labor. In machine operation, a whole baked pie on a pulp paper plate is cut; the pie and plate wedge then are conveyor fed into the wrapping station. Here, cellophane or polymer-coated film wraps are applied and sealed, and the completed packages are discharged to an outfeed conveyor for travel to the cartoner. Rigid plastic or paperboard boats are suggested for pies with exceptionally soft or runny fillings. The new unit is also adaptable to products normally cut into wedge form, such as individual-portion cakes. *Crompton & Knowles Packaging Corp., Holyoke, Mass.*



Thermoplastic quad stayer

A thermoplastic quad stayer intended for in-line operation with standard paper-box wrapping machinery has been introduced by New Jersey Machine. The quad stayer incorporates quick change-over features to reduce down time of the wrapping machine between runs of different sizes, says the company. It also features a top suction board feed, a 42-in. stack, low-level loading, high-level discharge, crank adjustments for length, width and depth, and a positive chain lug pusher feed. The unit, known as the H. V. Quad Stayer, is claimed to increase production, eliminate handling between staying and wrapping departments, cut waste and improve the quality of boxes. *New Jersey Machine Corp., 16th & Willow Ave., Hoboken, N. J.*



Slender polyethylene produce bags

A new stock line of slim polyethylene bags, pre-printed in three-color design combinations which vary according to the product, has been designed and introduced by Dobeckmun. The supplier notes that the snug-fitting Slim-Sell bags look better individually and permit neater, more compact shelf display without decreasing their cubic-foot capacity. Intended for apples, oranges, grapefruit, potatoes and onions, each bag depicts the product to be packaged, along with a sales slogan. The bags are available in the following sizes: apples—3, 4, 5 lbs.; oranges—5 lbs.; grapefruit—6 lbs.; potatoes—5 and 10 lbs.; and onions—2 and 3 lbs. Contact *The Dobeckmun Co., Div. The Dow Chemical Co., 3301 Monroe Ave., Cleveland 13.*

Short-run thermoforming machine

A thermoforming machine for short runs, sample runs, product designing, cost estimating and evaluation of materials—to be known as the Comet, Jr.—has been introduced by Comet Industries. The machine will do blister forming, skin packaging, drape and vacuum forming. It is reported to be economical and easy to operate. It is equipped with automatic heating, draping, seal-off and application of vacuum at the proper instant for quality control, the supplier notes. Mold area is 10 by 10 in.; sheet size 11 by 11 in.; sheet thickness 0.001 to 0.125 in.; drape stroke 4 in., and heater area 12 by 12 in. The unit requires a floor area of 16 by 32 by 41 in. For further details, contact *Comet Industries, Franklin Park, Ill.*

Closure with captive swivel nozzle

U. S. Cap & Closure has introduced a decorative swivel-nozzle dispensing closure which is suggested for use with

[Continued on page 162]

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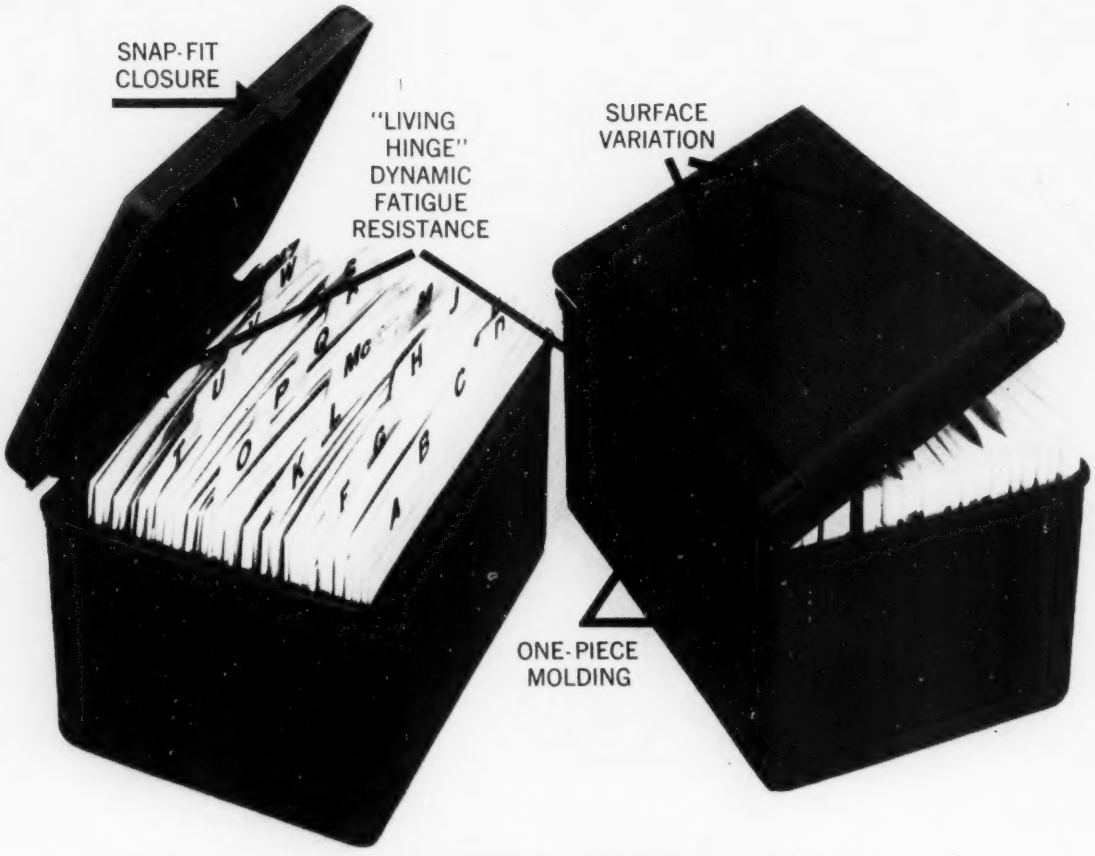

File box with "living hinge" shows design versatility of Escon® polypropylene

A "living hinge" with extraordinary life, snap-fit closures to replace metal parts, various surfaces—gloss, matte or textured—these are just three of the countless design possibilities when you mold with versatile Escon polypropylene. Testing of "living hinges" was discontinued after 1,300,000 flexes without signs of weakening.

Escon polypropylene offers molders a balanced combination of properties for high-speed, continuous production. These include resistance to acids, alkalies and corrosion; high strength; low volume cost; negligible water pick-up; high heat distortion point; excellent electrical characteristics; abrasion resistance; easy processing and many more. For technical assistance, write to Enjay at 15 West 51st St., New York 19, N. Y.

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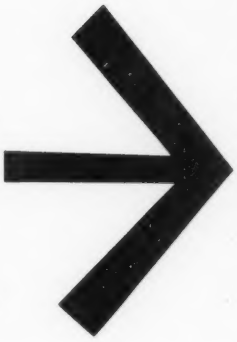
Garmold Plastics Division, Totowa Borough, New Jersey CCA **CONTAINER CORPORATION OF AMERICA, CHICAGO 3, ILLINOIS**

Not a "leaker" in a carload...they wear custom-threaded aluminum closures



from ALCOA

Ordinary prethreaded or lug-type caps meet certain standards of uniformity. The same is true of threaded glass containers. And even though industry standards help to limit tolerance problems when the conventional cap and the container meet, standards alone are not enough to eliminate breakage, rambling removal torques, "leakers," frustrated production personnel . . . irate customers. The answer to tolerance problems came with a totally new concept in closures . . . from Alcoa.

Custom-Threaded Alcoa® Aluminum Closures are tailored to fit each one of your bottles or jars . . . your container itself is the matrix onto which each of Alcoa's closures is individually rolled. The result: a perfect seal every time . . . unparalleled product protection. They're easy to open . . . just as easy to close. And your over-all capping operation is fast, more economical and more closely controlled with Aluminum Roll-on closures.

With Alcoa you can choose from a complete line of custom closures. Narrow- or wide-mouth Flavor-Lok® Closures, short- or long-flange Pilferproof, Standard or TopSide RO® Closures. Each offers special features that you'll find in no other closure on the market. And Alcoa Aluminum Closures can be beautifully coated and lithographed in all colors . . . can be attractively embossed, shaved and highlighted.

If you have an unusual closure problem, Alcoa can design and engineer a new closure to fit your needs. You get over-all closure economy and service with Alcoa. May we talk?

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Test the "buy-sight" of your package design

New Instrument Measures Visual Impact Scientifically

Consumer sales are built with "impact" packages. Now there's a way to evaluate the comparative visual impact—the "buy-sight"—of your package design.

An exclusive new optical instrument called the *Polarascope* has been developed by the Folding Carton Division of St. Regis®. It is designed to make comparative evaluations of each key segment of your package design: color dominance, lettering style and size, relationship of elements and total effectiveness. In short, the *Polarascope* takes much of the guesswork out of graphic design . . . lets you put a new package on the market with confidence.

The *Polarascope* is only one of many instruments in our Department of Visiometrics. There are others to analyze color impact, measure attention value and TV projection. Through such developments, the Folding Carton Division of St. Regis is now helping to create highly successful packaging for leading manufacturers in many different fields. These services are *yours*—part of the complete "package" from St. Regis.

If you'd like information about testing your own package design, just find the St. Regis plant below that's nearest you and drop us a line today, won't you?

Remember, imaginative packaging means a lot in any business . . . and St. Regis cartons *mean business.*

FOLDING CARTON DIVISION

St.Regis PAPER COMPANY

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NIFTY MANUFACTURING COMPANY, BIRMINGHAM, ALABAMA
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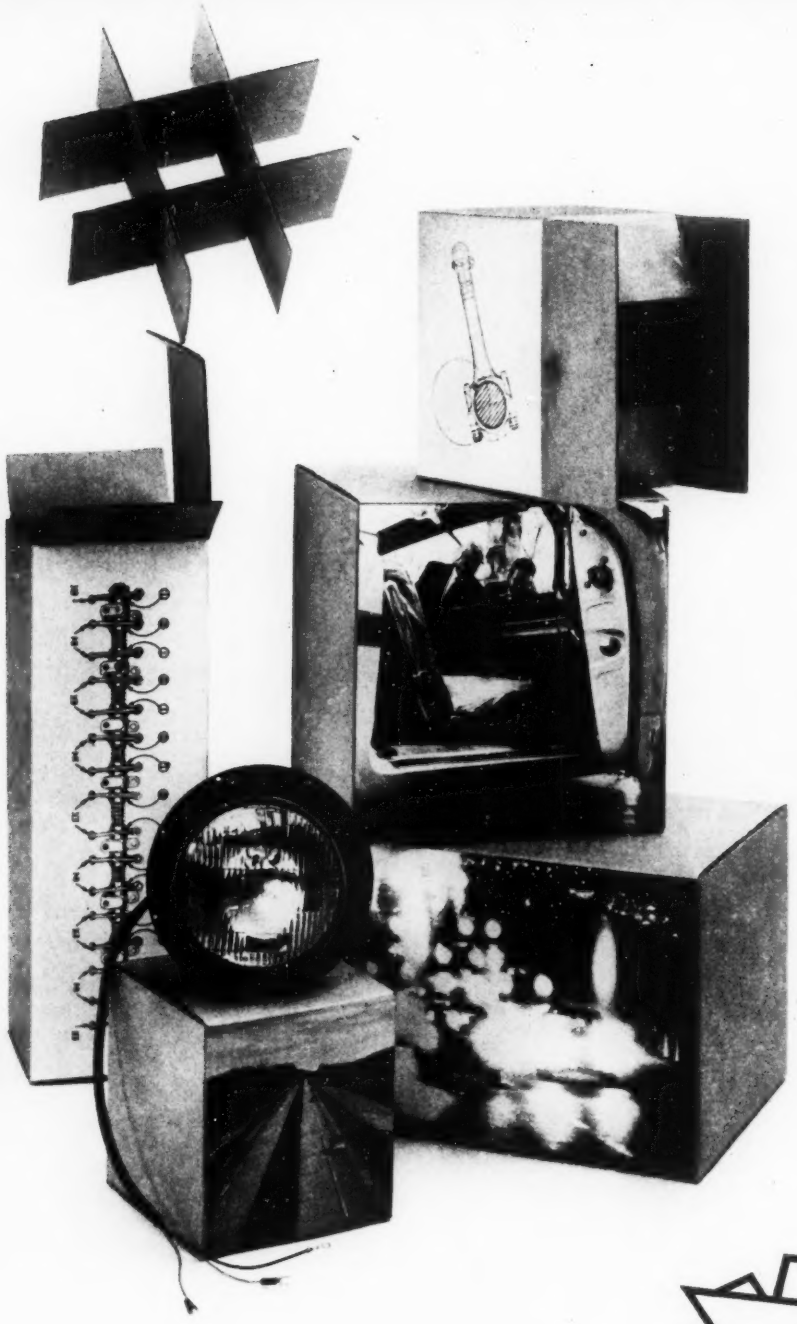

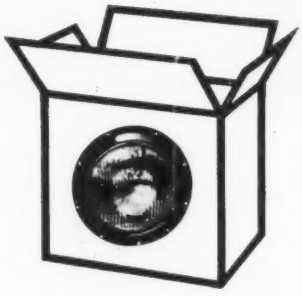

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Sounding BOARD

WE ASK THE READERS

How do you handle and benefit from packaging complaints?

Carl D. Schoby
Manager
Package Development & Design
Armour & Co.
Chicago

Complaints are classified first. Depending upon their nature, they are referred to the interested departments. In a diversified company such as ours, many have to be referred to several departments before final action. For instance, if a package-opening feature seems to consumers to be inadequate, perhaps an investigation will disclose that the package actually embodies the proper feature, but our opening instructions may not be prominent enough or need a restating for clarity.

In cases where new features have to be developed, these can be quite complicated and costly, and costs have to be assessed before we make any changes.

Consumer research is utilized when necessary, since research often provides a simpler and less costly solution than the basic problem would seem to indicate.

Manufacturers and food processors are constantly seeking to provide better packages, not only from the standpoint of building into them as much consumer convenience as practicable, but also from the important standpoint of protecting the contents of the package through the entire shipping and marketing cycle.

A recent example from the meat industry has been the introduction of a new bacon carton which overcomes the consumer complaint that the package was messy to open and could not be reclosed when a portion of its contents was used. The new package features a pull-out tray which easily slides back into the basic carton with no additional wrapping materials necessary for storage in the home refrigerator.

Kody Kodama, *President, Fresh Vegetable Package Co., Denver:* Packaging complaints from consumers are usually relayed to our firm by produce-department and store managers through the produce buyer to us.

We first visit the store and obtain first-hand information from the produce manager. Our next step is to call the customer and, in most cases, visit her at home to discuss her dissatisfaction. In nearly all cases we take samples of our complete line of packaged produce as a gift in appreciation for her frank criticism.

We feel we benefit from consumer packaging complaints for the following reasons:

1. They enable our personnel to establish a closer relationship with retail personnel. When making contacts, we encourage constructive criticism of all our packaged items. We find this a source of ideas for better merchandising. Very often the retail produce manager, we have found, takes a greater interest in merchandising our products thereafter.

2. Our relationship with retail buyers is enhanced by our prompt and complete follow-through of consumer complaints. Buying personnel feel that we are not terminating our responsibility with warehouse delivery, but that we will follow up all the way down to Mrs. Housewife if necessary.

3. Brought to the attention of our production personnel, consumer complaints usually result in an increased effort to improve our packaged produce items.

J. W. Kern
Sales Manager
Perfect Circle Corp.
Hagerstown, Ind.

Packaging errors are a serious matter in such a commodity as piston rings. Installations by mechanics are seldom made from stock on hand. Once the engine is disassembled and the specific needs determined, acquisition must be made by a trip, phone or mail order to a supply source, consuming time and adding expense to the work. Most jobs are "hurry-up" types, too, to satisfy impatient and inconvenienced car owners, or a heavy cost item through "down time" (loss of vehicle use) on trucks and tractors used to produce revenue for the owner. A supply of improper items or quantities in our packages carries a heavy harrassment factor! More serious still would be errors that would escape detection at installation and wind up as a major contributor to engine failure.

Each packaged product is coded by date and a record kept of the packaging personnel who handled it. By submission of this code data we can quickly pinpoint responsibility for a failure.

We have an "almost foolproof" system where every package is weighed against a standard package. This

is sensitive enough to alert us even if the variance is only the package instruction sheet. Supervisors "check the checkers" on a periodic sampling basis.

Fortunately, our consumer-packaging complaints are extremely rare. We compensate our people on standards emphasizing accuracy rather than volume of units. Recurrences of errors by any operator result in transfer to other types of work or dismissal.

J. E. Thompson
Group Products Manager
The Nestlé Co., Inc.
White Plains, N. Y.

The food industry is constantly on the move, providing consumers with new conveniences, and The Nestlé Co. is a forerunner. Thus, we hope to stay one step ahead of the consumer and we find that volume of complaints is diminishing rather than increasing.

Consumer complaints—and this includes constructive suggestions pertaining to packaging—fall into a number of areas, such as ability to remove product from package, convenience of closure, keeping quality, directions for use, product description and breakage.

Each complaint, after suitable acknowledgment, is scrutinized by the Product Department, Packaging Engineer, Package Design Department and Home Economics Department. Many of the improvements which are constantly being added in our packaging can be attributed to factors which were brought to our attention by consumers. Not only do these packaging improvements lead to increased consumer good will and demand for our products, but in many instances they lead to increased efficiencies in handling by retail-store operators, for example—in shelf stocking.

Needless to say, we try at all times to anticipate consumer complaints through field research and laboratory tests prior to launching a new package.

Nicholas D. Ellis, *Manager, Packaging Engineering Dept., Anheuser-Busch, Inc., St. Louis, Mo.:* A company dealing in consumer products can effectively use consumer complaints as warning signals that something may be amiss with either its products or its packaging. We know that, with the number of consumer exposures our packages have, running into the hundreds of millions, consumer complaints are inevitable, since the price of perfection, if it were attainable, would, of course, be prohibitive.

In our company, all consumer complaints generally come in through our far-flung wholesaler organization and are directed to our Sales Service Manager. Complaints pertaining to packaging are then directed through the Quality Control Department to my department for investigation. In many cases, complaints are not specific enough and we try to get either additional information or a sample of the package involved.

Once we pinpoint the nature of the complaint, we determine if corrective steps should be taken or if it was an abnormal occurrence not likely to recur. If the package seems at fault, we try to determine the frequency of complaints of this nature to evaluate whether the problem is serious enough for corrective action. If this is indicated, we take steps to make changes in a package to eliminate further complaints.

Our findings are submitted to the Quality Control Department which passes it on with its comments to our Sales Service Manager. He will apprise the wholesaler or, in some cases, the consumer as to what action is being taken to handle the situation.

Our company considers consumer complaints extremely important in keeping abreast of the effectiveness of our packaging. Many improvements have been made through the years as a direct result.

Russell A. La Mantia
President
Aunt Mid, Inc.
Chicago

Our consumer packaging complaints are nearly always received directly from Mrs. Housewife, either by letter or telephone. In all cases, we acknowledge the complaint with one of several form letters adapted to the specific complaint. This enables a prompt response and convinces Mrs. Housewife that we are sincerely interested in her criticism.

We ask that the package be saved and advise that a representative will call to discuss the complaint within a few days. This serves as an effective "cooling-off" period and enables us to discuss the matter objectively and rationally with the consumer.

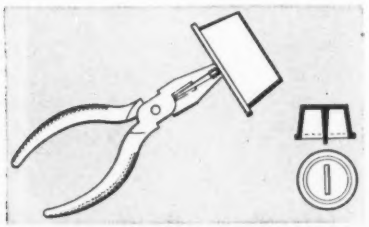
Complaints generally fall into two categories. In the event of quality deterioration, we explain the code date printed on each package at the time of packaging and then correlate that date with the time of purchase. Whether the complaint is valid or not, we believe "the customer is always right." With this type of complaint, we attempt to educate Mrs. Housewife on the high degree of perishability of such items as cole slaw, spinach and salad mixes.

Complaints arising from foreign material in a package of produce are more difficult to explain. Despite numerous washings and rigid grading practices established for all our products, an oak leaf or some other item will still turn up, although very rarely, in a bag of spinach. With this type of complaint, we explain our packaging operation to show how we try to provide the most sanitary package possible.

In all cases, we take to the consumer a sample of every commodity packaged by our firm and invite the entire family to visit our plant. Our packaging facilities never fail to impress these consumers and in the majority of cases we end up with a loyal and satisfied customer. While we receive few complaints, we welcome them because we know that a satisfied consumer will comment favorably concerning our products to her friends and to her neighbors. Never can any dollar value be placed upon this type of publicity.

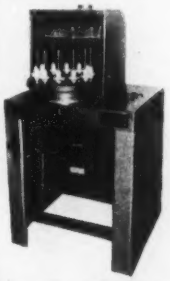
Packaging Notes

Polyethylene pull plugs have fixed place to grip, so they're easy to remove and install with either fingers or pliers. Typical uses, according to the manufacturer, are: protection of pipe; tube and

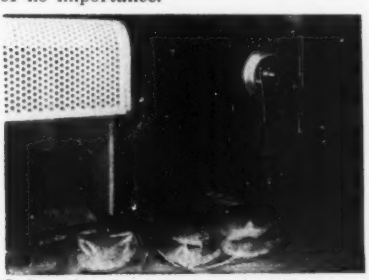


hydraulic fittings; testing and shipping; sealing dirt- and moisture-catching openings; masking when spray painting, dipping or plating. Sizes range from ¼" to 3"; color is standard "caution" orange. Company also offers polyethylene tube caps, finishing flanges, flat washers.

Electronic bombardment of polyethylene bottles—to make their surface more receptive to printing inks—is claimed to be fast and efficient with an Italian-made machine about to be introduced in the U. S. A. Toys and other hollow polyethylene products, as well as bottles of any size or form, can be treated. Specifications include: output up to 2000 pieces per hour, depending upon product and model; built-in ventilation hood; push-button controls; spring-wire electrodes.



Automatic date and price coder developed specifically for the bakery trade is being marketed as an accessory to the maker's polyethylene bag-sealer. It reportedly stamps each sealed bag clearly and legibly, although package itself may be uneven. Imprinting foot actually moves the wrapped item, so spacing is of no importance.

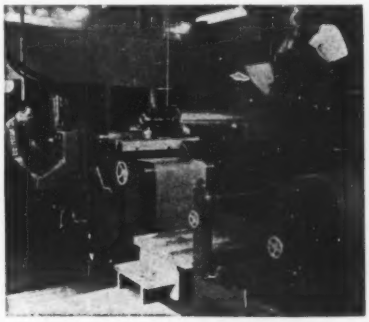


Code-marker for use with polyethylene bag-sealer prints price or date directly on package of hamburger rolls.

Polyethylene Coating: Door To New Packaging Developments

U.S.I.'s PETROTHENE® 205-15 Coating Resin Has A Wide Range Of Properties, Adheres Well To Most Substrates

Paper, paperboard, cellophane, "Mylar," glass fiber (scrim cloth), foil, acetate, parchment—along with polyethylene—all play important individual roles in today's packaging industry. But this is a highly specialized age and the myriad basic materials available are still not altogether adequate. More and more, designers are calling for a combining of the inherent characteristics.



The board coating machine above, located in U.S.I.'s Polymer Research Laboratory in Tuscola, runs at speeds equal to or greater than commercial equipment, duplicates the latter in everything but width.

Extrusion coatings of polyethylene are making possible such property variations, imparting new capabilities to the above materials.

U.S.I. supplies specific polyethylene coating resins for many specific applications, but PETROTHENE® 205-15 is outstanding for its versatility and working characteristics. It's easily handled at high speeds . . . has excellent adhesion, high draw-down, uniformity, and low neck-in – all the properties extruders want. It can be used on almost all porous and non-porous substrates.

To the packager or other user, it offers: unusually high greaseproofness; good heat sealability; low moisture-vapor permeability; good flexibility, even at refrigeration temperatures; high chemical inertness; absence of taste, odor, toxicity; economically low coating weights.

Packaging breakthroughs made possible by polyethylene coated material include multi-wall bags with a polyethylene-coated kraft inner ply for shipping dry chemicals, fertilizers . . . individual sugar servings wrapped in polyethylene-coated "pouch" stock . . . liquid milk containers of board stock coated inside and out with polyethylene . . . grease-resistant machinery coverings of kraft heavily coated with polyethylene.

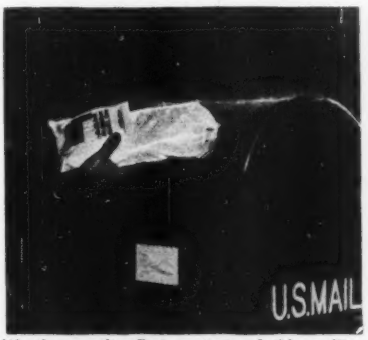
Polyethylene Lab Ware Featured In New Catalog

Polyethylene Buchner-type filter funnels, 125 ml. Erlenmeyer flasks and other laboratory items never before available in plastic are included in a 24-page catalog just issued. It shows the maker's entire line, indicating a reduced price on plastic bottles and carboys. Technical section contains a chemical resistance chart.

Products Arrive As Shipped In Polyethylene-Lined Mailing Bags

Polyethylene-lined mailing bags are ideal for shipping samples or small quantities of products requiring moisture protection or retention. Dehydrated food, flour and chemicals are examples of the former; plant food, of the latter.

The bags can be filled manually or automatically. Liner, which extends slightly above bag mouth, is banded, wire-tied, or heat-sealed closed; then, pushed down into the cotton outer bag.

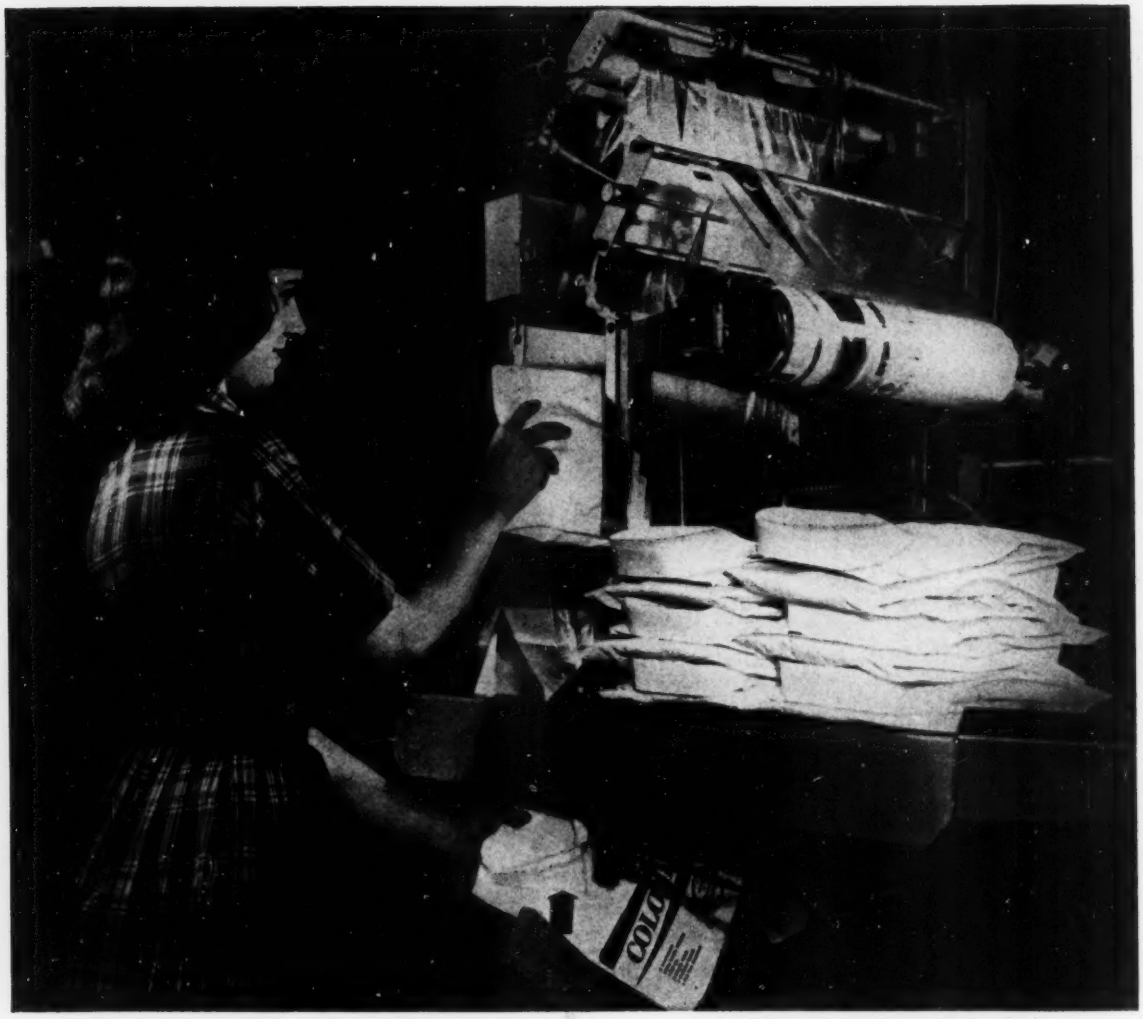


Weather won't affect contents of this mailing bag . . . it's polyethylene-lined!

Pulling drawstring tight insures protection of inner bag.

These polyethylene-lined mailing bags come in sizes 3" x 4" to 10" x 17". For first-class mailing, they can be supplied with envelope sewn in bottom seam. Printing is optional.

Also available are plastic-laminated and extrusion-coated cotton bags for sending samples of products or metal parts which will not sift, but must be protected against moisture or dirt.



This semi-automatic machine at Colonial Corporation of America makes a polyethylene bag around each shirt using printed roll film.

AUTOMATED POLYETHYLENE PACKAGING CUTS COSTS 50%

Colonial Corporation of America boosts packaging efficiency and sales while halving packaging costs with polyethylene packaging system.

More than half of Colonial Corporation's yearly output of 30 million low-priced shirts is packaged semi-automatically in printed polyethylene bags. The bags are formed around the shirts on See-Safe machinery using rolls of printed polyethylene film. And the company plans to extend the system to its entire operation.

Sol Berger, president of Colonial, the country's largest producer of inexpensive shirts for men and boys tells why:

"Increased efficiency. One operator on each machine replaces four girls who handled the earlier manual bagging operation.

"Lower costs. When we switched from cellophane overwrap to polyethylene bags five years ago, we cut costs 35%. With the automated polyethylene packaging system, we cut costs another 50%. The See-Safe machines are relatively inexpensive. We figure we amortize each machine in about 6 months. This polyethylene packaging system lets us market shirts at a low price — as low as one dollar at retail for one of our biggest sports shirt sellers.

"Expanded sales and profits. The package, printed in various colors and automatically registered by the machine, is attractive as well as economical. The customer can see the merchandise through the transparent film. The bag is sealed on three sides with two spot seals at the bottom. This lets the customer feel the fabric, yet keeps the shirt well protected and in place."

Investigate the cost-cutting, sales-stimulating advantages of automated polyethylene packaging for your soft goods. As a producer of PETROTHENE® polyethylene resins from which film is made, U.S.I. has a trained staff of film and packaging engineers. They are available to work with you and your film supplier in finding the packaging system that is best for you. A call will put them at your service.

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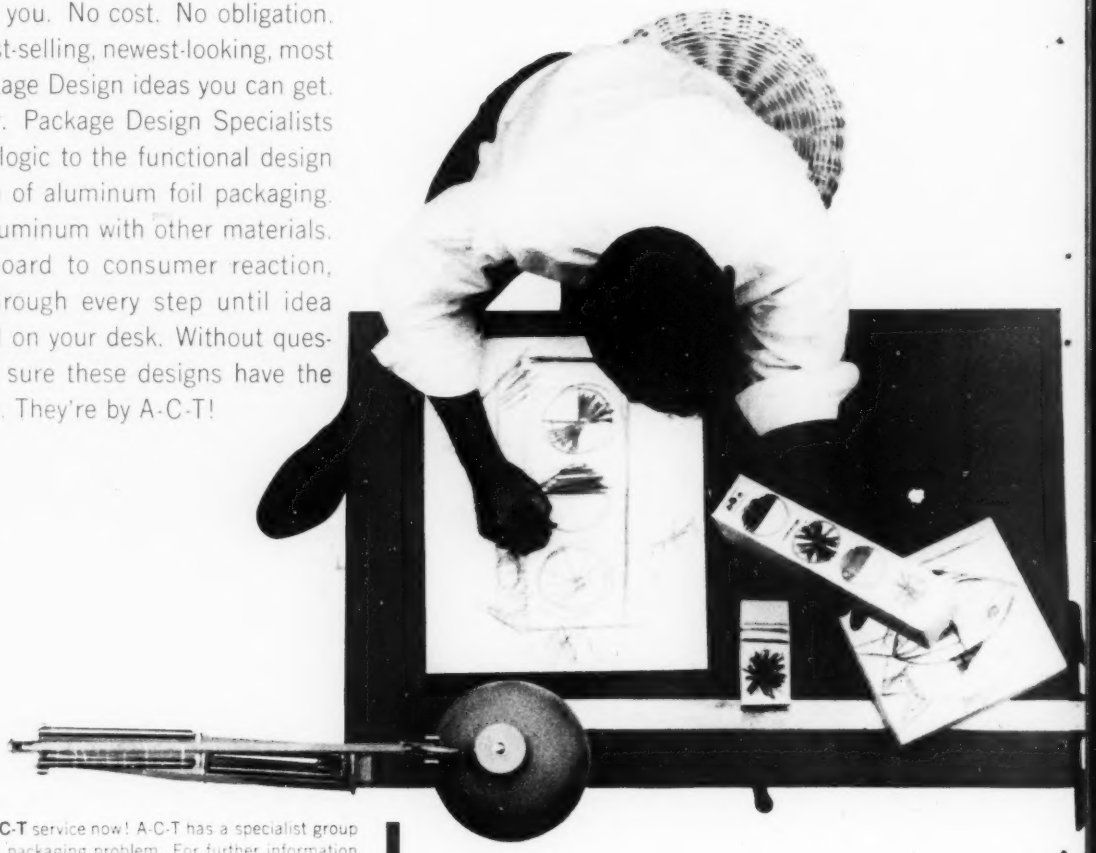

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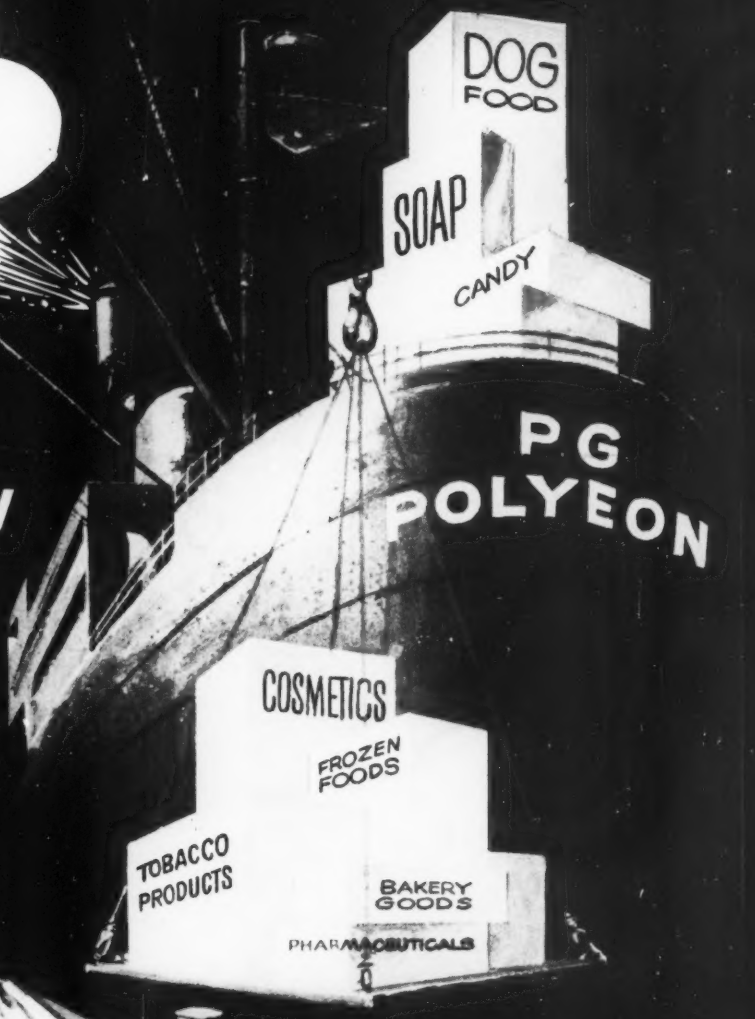

This 3-in-1 Boxboard Easily Could be Your Passage to a *NEW WORLD of PROFITS*

Product sales pacers, boxmakers, and appreciative consumers . . . all alike are acclaiming cartons made of PG Polyeon boxboard. Thanks to a special Lowe process, its polyethylene coating prints and glues exceptionally well . . . gives deep-gloss finish beauty . . . protects product freshness . . . has a warm and friendly feeling.

3-in-1

Money-saving, one-piece folding cartons, when made of PG Polyeon boxboard, often are able to provide all the moisture, grease, or chemical barrier protection a packaged product needs.

Eliminating need of costly inner and outer wraps in many cases, PG Polyeon cartons are effecting substantial packaging economies in field after field. The manufacturer of any product that benefits from moisture, grease, or chemical barrier protection definitely is "missing the boat" if he fails to investigate PG Polyeon. A letter or phone call is all that's required to obtain information, samples, and technical advice if required.

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NEW

PLASTIC BOTTLE SOLVES LIQUID MIGRATION PROBLEMS

BLOW-MOLDED OF RIGID GEON

If you can't use plastic bottles for your product because of liquid migration problems, here's good news: bottles blow-molded of rigid Geon vinyl can retain the liquids that other plastics can't. The only way the contents can escape is to pour them out.

A test of a well-known household cleaner demonstrates the low, low permeability of rigid Geon. In other plastic containers tested, 40% of the contents was lost in a year — in the Geon bottle, less than 3%. Motor oil is another example. It migrated through other plastics in tests, making the surface sticky. Not with bottles of Geon — the surface was the same — pleasant to the touch after the same period. A shampoo preparation made a bottle of another plastic lose its attractive shape in four months. No change in the Geon bottle. All because Geon vinyl resists chemicals like no other plastic material.

Bottles of Geon give you better structural rigidity, a choice of vivid colors, and — to cap it all — a transparent bottle with impact resistance. It's another demonstration of how Geon improves a product. Want to hear more? Write Department NA-3, B.F.Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15, Ohio. In Canada: Kitchener, Ontario.

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Geon VINYLS

WORLD REPORT

*Abstracts from foreign packaging magazines**

FRANCE

Fill control with beta or gamma rays

A solution to the problem of package fill control by the use of beta or gamma rays is described in *Emballages* (France). According to this account, the method, discussed as suitable for powders, granules and liquids, may be applied without risk of polution of product or danger to personnel by irradiation. The procedure is as follows: The packages being filled are conveyed between a safely enclosed small source of radioactive beta or gamma and a detecting device—adapted for control of specific application—which is connected with electrical circuits. When the fill is out of control, the circuits relay signals.

Packaging essentials for selling in France

When selling British (or American) products in France, the packager must (1) use the metric system of weights and measures; (2) print recipes and other information in local tongues; (3) have the packages designed to suit local preferences. This was the advice given by Pierre Louis, director of the French Packaging Institute, in an address before the southern area group of the British Institute of Packaging in England.

"I know of one German package that is a very successful one in Germany, yet is unsuccessful in France," Mr. Louis is reported as saying. "It needs a new package design to compete in other countries." He outlined the methods for visual research and attitude surveys developed by the French Packaging Institute through six years of study to determine best procedures to attain package effectiveness.

ITALY

Difficulty with labeling for export to Germany

Problems of importing packaged products into Germany from Italy due to differences in labeling regulations were brought to light at a food fair in Monoco. *Notiziario dell' Instituto Imballagio* reports that one German importer was fined and sentenced to 10 days in prison for having sold imported bottled goods, the label of which stated that the flacon contained *about* 280 gms. and 45 deg. of alcohol strength. According to this account, the contention was that whereas the alcohol content was stated exactly, the container actually held 290 gms. of product. The use of the word *about* (circa) is not permitted in Germany. Also the statement of total net weight composed of part liquid is not permitted in Germany. The label must state what part of the product is liquid and what part is solid with maximum precision, this source said.

Slip-on, pull-tight, plastic-bag closure

Called Closure 8, an inexpensive, one-piece, slip-on closure for plastic bags, developed in France, comes fully assembled so that the operator has only to pick it up, slip one loop of the "8" over the neck of a bag and pull the other loop tight. According to *Packaging News* (England), the first loop has miniature projections evenly spaced out along its outer side, which act like a ratchet as one end of this loop is pulled through the closure's collar. Once tightened, it can be loosened only by manipulation and, when it is used to suspend a bag, the greater the weight the tighter the loop is drawn. Although made in but one size, the slip-on loop is big enough for gathered-together necks of large bags. It reportedly will safely support weights up to 28 lbs.

GERMANY

Work group for container standardization

In Germany there are 500 different types of cans in use by meat packers, a variety of 4,000 bottles made by one glass factory, 544 shapes and sizes of drums produced by one drum manufacturer. These examples are cited by *Pack-Dienst Der R. G. Verpackung* (Germany) to point out the lack of standardization in German packaging which, this publication says, "goes far beyond reasonable boundaries."

"Although manufacturers, users and customers are perfectly aware of this situation, mainly due to a ruinous battle between competitors," the article continues, "up to now all attempts to clear this mess and to come to a certain standardization have been in vain, in spite of the fact that customers realize very well that they have to pay the extra cost. A special work group has now been formed by the Rationalizations-Gemeinschaft Verpackung to study the problem and to come to an understanding with all parties involved to reach a standardization scheme which can become operative as soon as possible. This is no doubt an important feature of all the rationalization plans to increase badly needed productivity," it is stated.

THE NETHERLANDS

Criteria for electrical-goods packaging

Seven packaging experts from the European electrical industry, including Siemens, Telefunken, AEG, Standard Electric and Lorenz, recently visited the Benelux countries, France and Great Britain, according to a news bulletin of *Nederlands Verpakkingscentrum*. The team was part of the work committee, Packaging Articles for the Electrical Industry, initiated by the German *Rationalisierungs Gemeinschaft Verpackung*. The team visited Dutch factories early in the year and met with Dutch specialists to discuss the following subjects: (1) aim of standardization and criteria for electrical-goods packaging; (2) measuring instruments and test equipment used to investigate packaging materials and package performance; production efficiencies and costs.

FRANCE

Standardization of wine bottles

Glass manufacturers, wine bottlers, cork manufacturers and others are working through Institut National de l'Embouteillage toward standardization of the necks of cork-mouthed bottles such as are used in the wine trade, according to *Embouteillage Informations* (France). "It is really very remarkable," the article reads, "to find that comparing one bottle type with the other, the necks have all different shapes depending whether the bottle comes from Alsace, Bordeaux or Burgundy. Although the fact is recognized that a particular design is often based on tradition, nevertheless it seems possible to create a standardized model. Consumers are not apt to criticize the flat band around the top of the bottle whether it be smaller or wider, or at a more or less different distance from the upper section of the body. Existing differences oblige glass manu-

*For additional information, write: World Report Editor, MODERN PACKAGING, 770 Lexington Ave., New York 21.

facturers to have different molds and bottlers to have several types of closures, not counting additional labor involved for these differences." A committee working on the problem is recommending standard interior mouth diameters and standard measurements for exterior profiles.

ENGLAND

Canned oil— new trend in UK

Further evidence of a trend in Britain to American packaging practices is the news that Regent Oil Co.'s service stations throughout England have swung over to sealed cans for lubricating oil instead of capped glass bottles. According to *Packaging Review* (England), this company is the first major oil company in the UK to adopt sealed cans, which are used in such vast quantities in the United States—1.5-billion quarts a year. The production line, it is said, is set up to handle 3,000 cans per hour, including automatic case loading. Other British oil packers are interested in the fact that floor space required is reportedly 1,000 sq. ft. less than the previous bottling line, because a bulky and expensive bottle-washing line is no longer needed; also in the better use of storage space for both empty and filled bottle stocks.

Polyethylene bottle with scented molded rose

A polyethylene bottle for bath salts marketed by Duma Fiori (Torino), Ltd., in England has several interesting technical features reported in *Sales Appeal & Packaging Technology* (England). Both bottle and stopper are blow molded. And the bottle incorporates an integrally molded spike on which is impaled an injection-molded perfumed polyethylene rose. The two halves of the spike were formed by the two molds so that it is positioned on the mold line. Duma Fiori sold half a million of these packages during last year's holiday season and plans to use a similar flower-decorated container for talcum powder and toilet water.

Installation of new body-and-neck labelers

The first three of nine high-speed body and neck labeling machines built in Dusseldorf (by Jagenberg) have been installed in a large English brewery. According to *Packaging News* (England), a feature of the machines is that they will handle a mixed supply of bottles. The first of the three machines apply neck and body labels to mixed champagne-shaped and goitre-necked half-pint bottles. On another setting, adjusted for greater height, the machines are being used for mixed champagne and steinie Imperial pint bottles. Output is 100 to 300 per minute. Bottles may vary in height plus or minus 3/16 in., though tolerance of diameter variations is fairly close. Three sizes of oval and rectangular labels may be applied, as well as slanting labels. Any type of glue may be used. Consistency is maintained by a glue pump that keeps the adhesive circulating so that a thin, even film is applied. Labels are transferred to the bottles by grippers plus sponge-rubber pads and the ends of long labels are additionally blown on to the bottle surface by jets of air emerging under pressure from adjustable tubes. The machines can be fitted to handle bottles of almost any shape and in a variety of sizes.

Automatic bottle-wrapping machine

A British machinery manufacturer (Forsters) has developed a fully automatic bottle-wrapping machine, with rated speed of 55 per minute, in collaboration with the makers of Beefeater Gin, who were experiencing a serious bottleneck in hand wrapping ever-increasing quantities for export to the U.S. and elsewhere. Although the machine was designed primarily to apply PT and MST cellophane, it will also apply paper wraps of suitable substance. The machine can handle round, square or flat bottles, cans or jars. Bottles are transferred singly from the feed conveyor to stainless-steel formers carried by the intermittently moving main conveyor. In so doing, they pass into the wrapping material, which is fed into position before transfer takes place. During the bottle transfer, the material is held firmly against the bottle to prevent it from moving out of position. As it enters the former, the material is folded around three sides of a square bottle (or 180 deg. around round or flat bottles). Folder blades make the final fold, overlapping the film material and sealing it by heat or moisture according to its particular type.

At another stage, the sleeve is folded and sealed to the bottom and a pleating head is lowered over the top of the sleeve to form 12 neat pleats. As the bottle passes to the next station, a twisting head grips the pleated portion and rotates four times, making a neatly twisted top closure with straight vertical pleats. Change-over time from one-size bottle, can or jar to another is reportedly 15 minutes.

One wrapping machine handles any plastic film

By the use of pneumatics to actuate wrapping mechanisms, a new machine has been developed by a British firm to handle all types of heat-sealable materials, according to *Packaging News* (England). The machine—offered in three models—is designed to overcome the problem of capital cost of a re-equipping machinery to handle cheaper and functionally superior wrapping materials that are introduced from time to time. The new machines employ pneumatically operated folding motions, controls for which are grouped for greater convenience, together with the temperature controls. The wrapping motions are controlled by micro air valves which represent the equivalent of an infinitely variable cam form—something that is impossible, the supplier says, by mechanical means. By a simple adjustment of the micro valves, the motions may be adjusted to suit any overwrapping materials. Standard fittings including the flexible base sealer which accepts undulating seams and can base weld seams when there is no firm backing; a no-pack, no-film safety device, and static-electricity eliminators fitted to the film feed. The overhead transporter, essential for thorough welding and subsequent cooling under controlled conditions, is hinged at the discharge end. Because of the use of pneumatics, the turn of a valve lifts the whole assembly upwards, permitting clearance and inspection without removing parts.

Large-size seamless aluminum containers

The brilliant design work of a young British engineer has resulted in a high-speed process for necking-in aluminum shells to produce seamless bottles and pressure containers up to sizes not previously produced anywhere in the world by this process, says *Packaging* (England). The seamless containers, made in 20-, 40- and 80-oz. capacity, are recommended as inexpensive disposable packaging for aerosols, pressurized packs and for atmospheric packing of chemical products of various types.

Sample maker for production runs

Built in five sizes to handle solid fibre or corrugated board, sample-making tables supplied by a British firm are being recommended for short runs of containers. One model has already been sold to glassware, television and radio manufacturers wanting to make up short runs of cases of special sizes in their own packing rooms. One large table accommodates a hand-operated shear-cutting unit, treadle-operated slotters, treadle cross-creasing equipment and a motorized rotary-cutting and longitudinal creasing unit.

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When you buy rigid foil containers, you want a particular size, shape, gauge, and color. We can provide it. Need package design help? We are staffed to serve you. But even the best foil container is incomplete without fast, efficient closure equipment on your line. Fully-automatic, semi-automatic, or sized-for market testing . . . for use with board cover, transparent plastic, heat shrink film, or hermetic seal . . . Ekco-Alcoa has closure machines available on either a sale or rental basis to fit your exact packaging and production requirements. Plus qualified engineers to train your personnel – and install and service each piece of equipment. Providing the complete foil package – from basic container to final closure – is Ekco-Alcoa's specialty. See your nearby Ekco-Alcoa distributor for further information. And write to our Packaging Equipment Division for material on the advantages and performance features of our closure machines.

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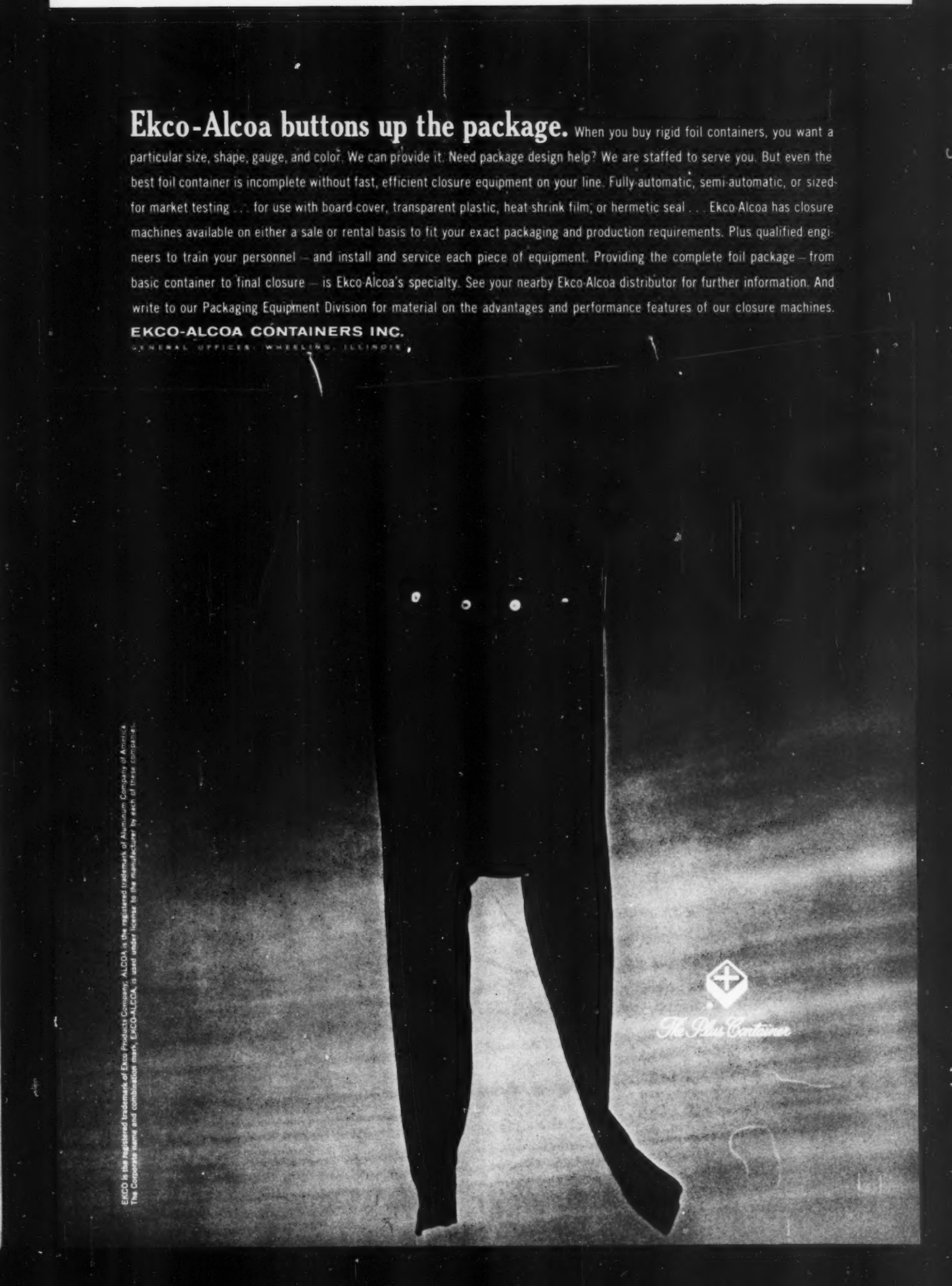

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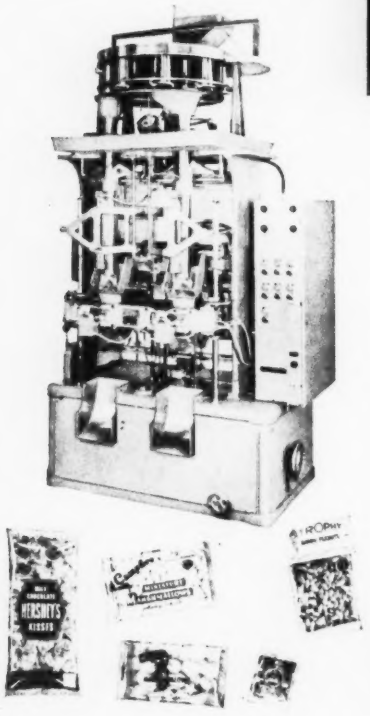

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The Triangle Twin is fast . . . 120 bags per minute with any bag material (90 per minute with polyethylene). It will handle a full range of bag sizes, up to 8" x 15".

The Triangle Twin is a fully integrated combination of two efficient single tube machines with one common drive . . . yet sealing jaws operate independently to permit one side to operate while the other side is down for film threading or routine maintenance. This feature results in *less* downtime and more production than normally expected.

The Triangle Twin mounts up to *six* Elec-Tri-Pak net weighing scales on top where they belong. No costly intermediate elevator feed is required. Volumetric filler and other synchronized systems are also available.

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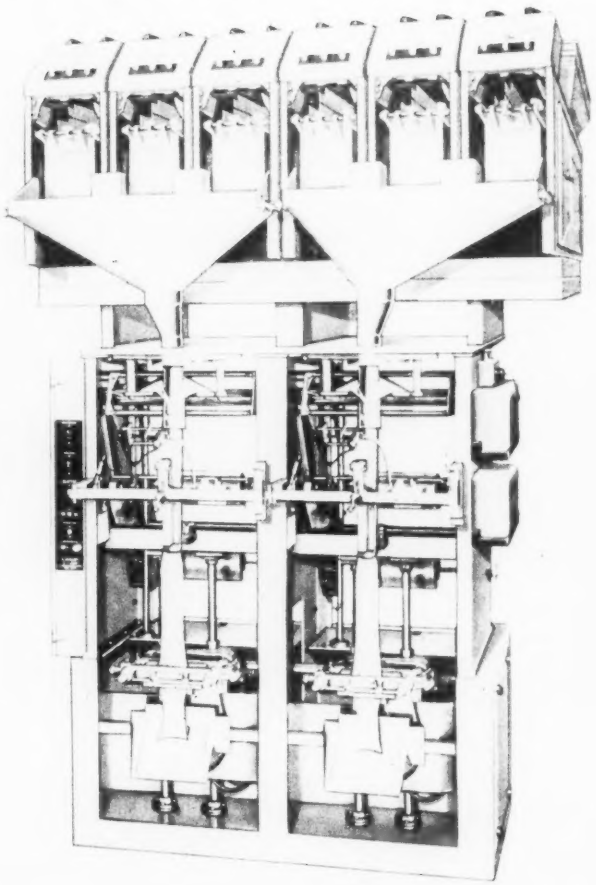
See for yourself how far the Triangle Twin has advanced the concept of high speed bag making, filling and sealing. Write today—without obligation, of course.



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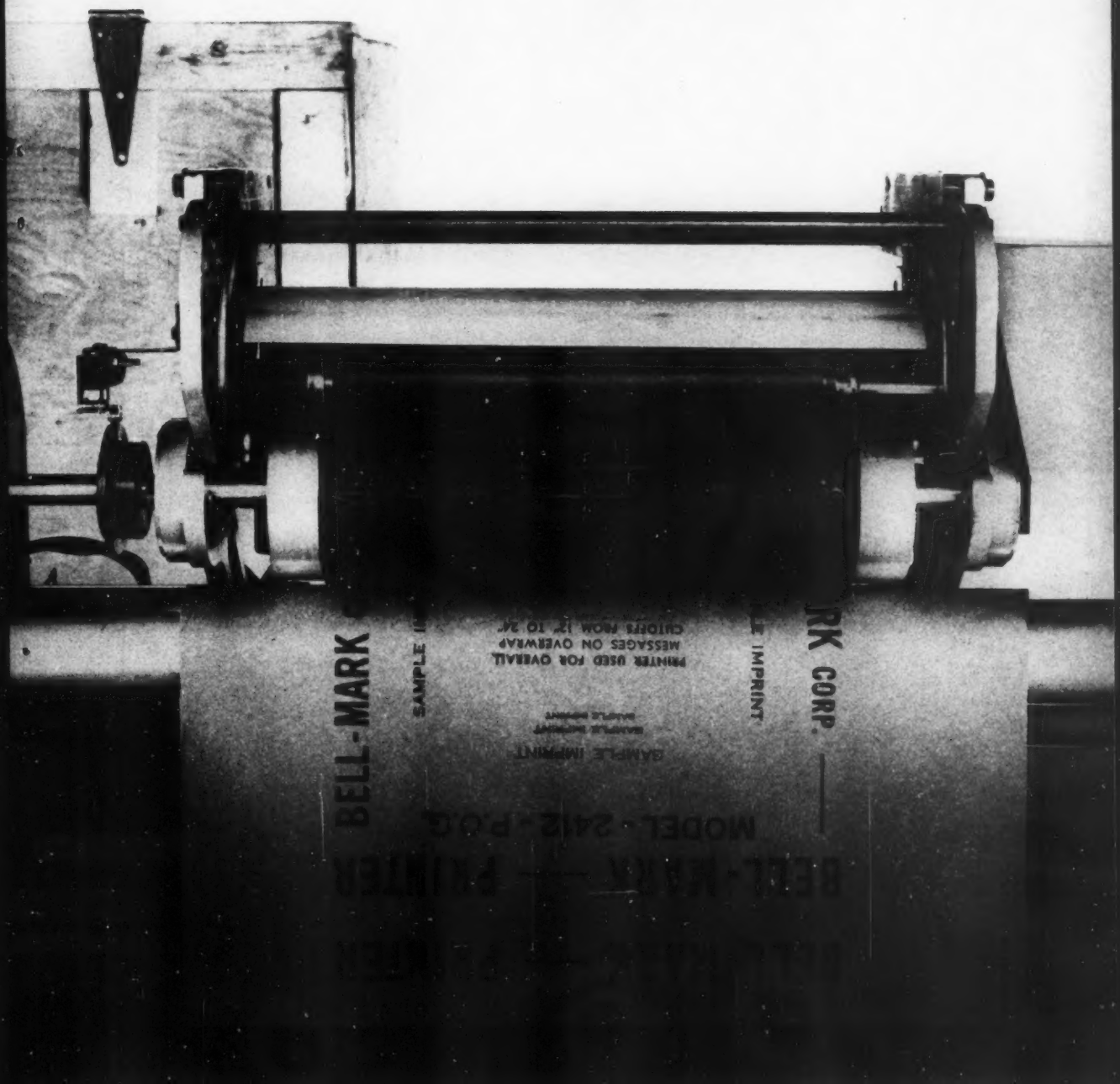

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thanks to this new two-plastic bottle cap

Hundreds of children are poisoned every year by medicines they take accidentally. Now, a leading bottle manufacturer announces "the first major improvement in prescription packages in fifty years"—a new plastic safety cap that cannot be opened by 97% of preschool children tested.

Manufactured for the Brockway Glass Company, Brockway, Pa., by Seals, Inc.,* the safety cap consists of a high-density polyethylene outer shell and an inner cap made of C-11, a styrene copolymer developed by Union Carbide Plastics Company. Fitted together, the combination looks like a conventional bottle cap. But it must be pressed down and turned to open, operations that can rarely be performed simultaneously by a young child.

This new cap made of two BAKELITE Brand plastics is another example of the importance of these materials to improved packaging. Ability to adapt to new forms and functions, durability, and handsome appearance, are all properties that make these materials useful in a field where new ideas play so important a role.

An unusual closure like this depends largely on having a selection of the right plastics to work with. Union Carbide Plastics Company has the largest variety of plastics for packaging available. Each is engineered for a specific use. Each is capable of complementing other plastics in more complex package design. Find out how this can mean production savings and improved product performance for you. Write Dept. KF-86E, Union Carbide Plastics Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N. Y. *In Canada:* Union Carbide Canada Limited, Toronto 12.

*U.S. Patent No. 2964207

Lugs on inner cap **(right)** engage those inside the outer cap **(left)** when pressure is applied, permitting the whole cap to be unscrewed. Otherwise, the two leaf springs molded to the inner cap keep lugs from engaging, and the cap turns without opening.

UNION CARBIDE

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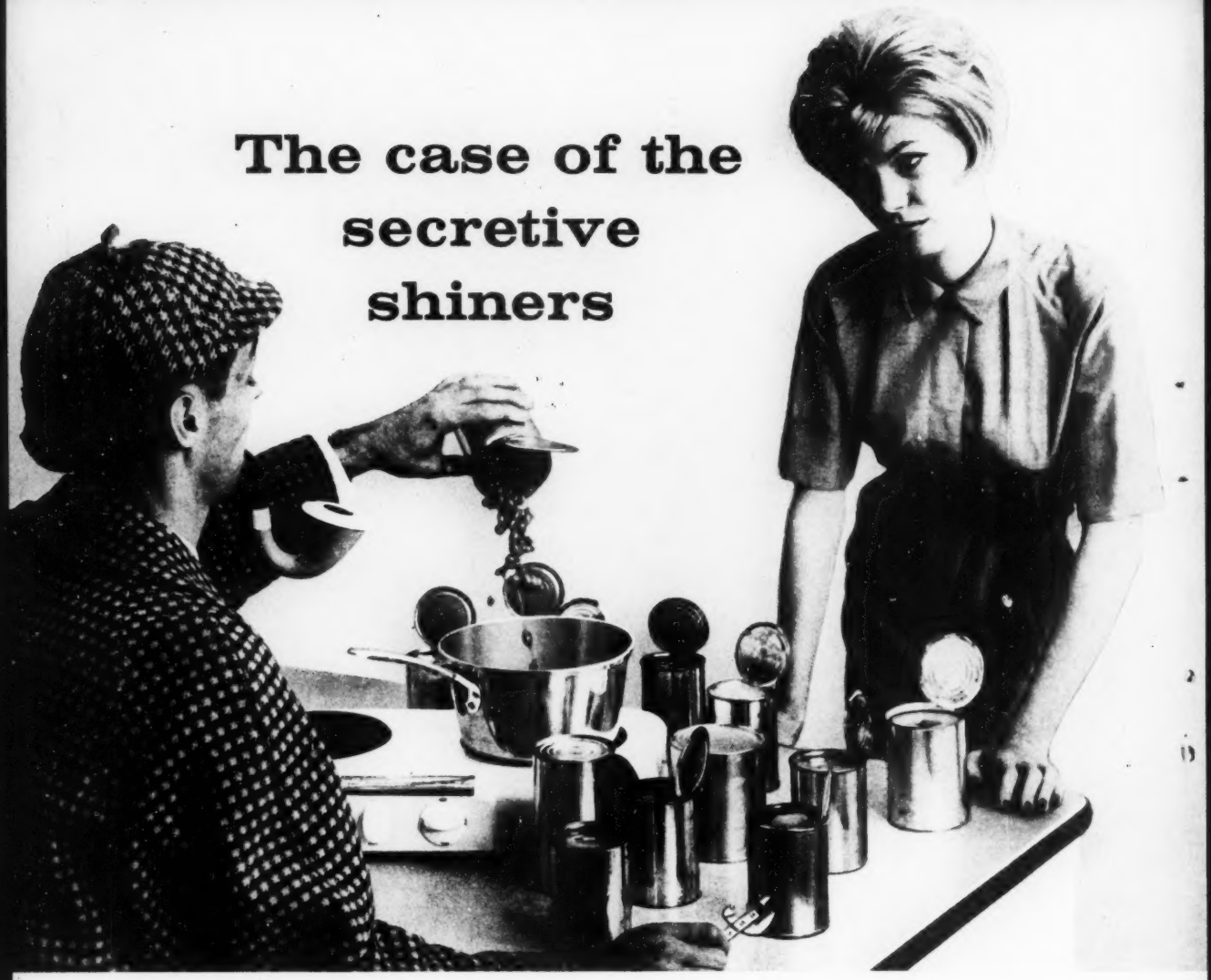
The case of the secretive shiners



MISS WATSON: *Fearless, you look like you're preparing a vegetarian's banquet!*

FEARLESS FULLER: I'm eating in today—and I'm hunting for a can of beans.

MISS WATSON: *But how can you tell what's inside BARE cans?*

FEARLESS FULLER: They're called "shiners," Miss Watson. A disgusted canner gave them to me. I have to guess what's inside.

MISS WATSON: *How come they didn't get labels?*

FEARLESS FULLER: The old-style pick-up glue wouldn't grab the label edge because the cans were too wet.

MISS WATSON: *But I bet you specified a Fuller glue to solve the problem, Fearless!*

FEARLESS FULLER: Of course, Miss Watson. Remember, Fuller has eight different grades of Nu-Type Hot Pick-Up glues. There's a right grade for the temperature and moisture conditions of *every* canning line. Fuller's Hot Pick-Up gives good mileage—is non-staining—and dries transparent! Now my customer's cans are grabbing labels like kids snatching free hot dogs!

MISS WATSON: *Oh Fearless—you're so . . . so . . . sure of yourself!*

FEARLESS FULLER: No, Miss Watson. We Fuller men are sure of Fuller *adhesives* . . . there's one for every sticky problem!

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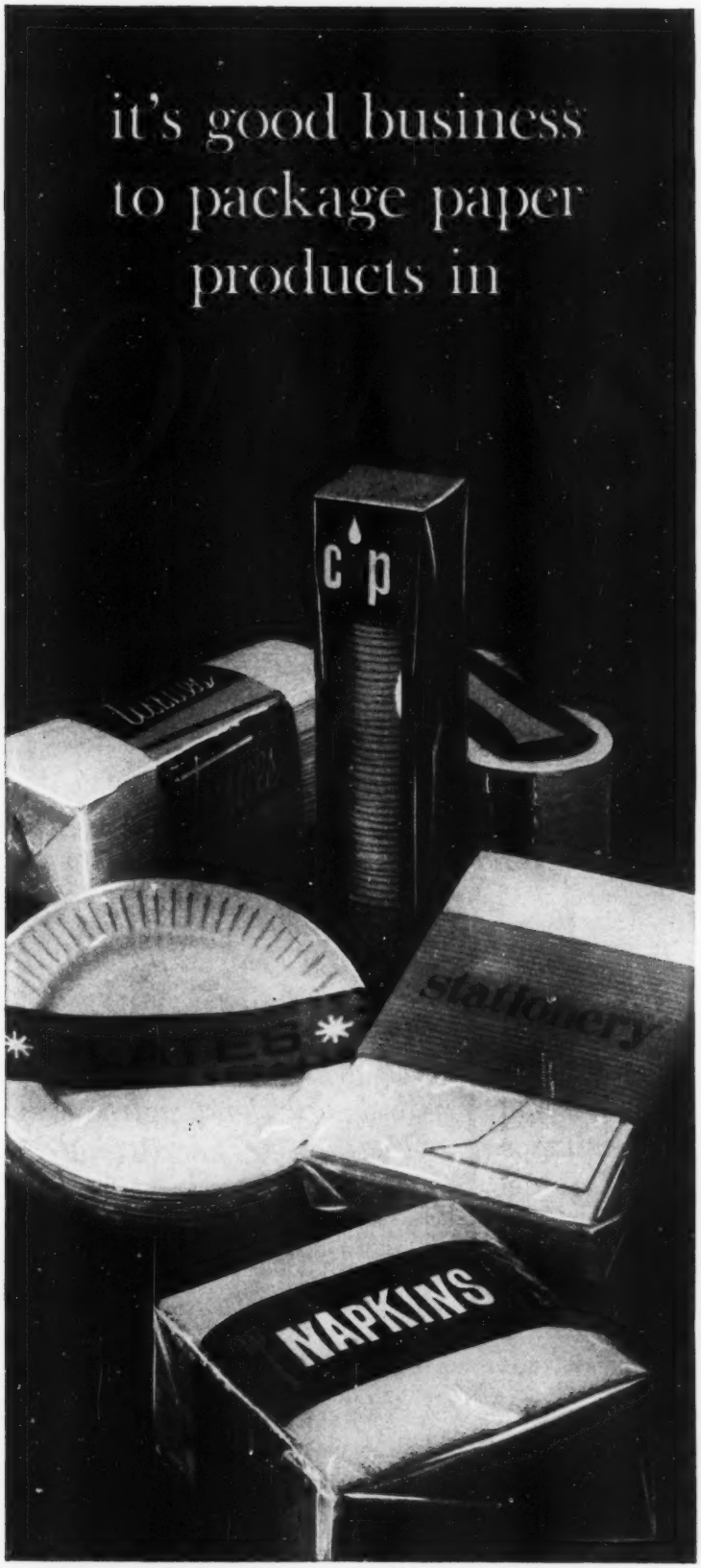

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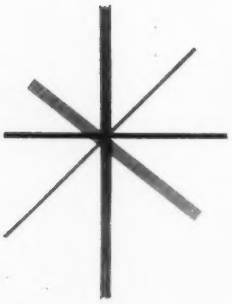

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EDITORIAL MEMO

New signals on deception

Storm warnings are up and packagers will do well to note the sudden change of the weather in the area of "deceptive" packaging.

In the celebrated issue of the United States of America vs. 174 cases of Delson Thin Mints, the Government has now won a sweeping victory in Appeals Court, after the case had been summarily rejected by a Federal District Court. The sharpness of the decision with which the appeals judges remanded the case to district court leaves little doubt that the F&DA now has the weapons it has long sought for all-out war on this front.

The question at issue is whether the Delson Candy Co. was deceiving the consumer with a closed carton in which the mints occupied less than half the available space. The company argued (a) that the hollow ends and hollow paperboard spacers which divided the box into three compartments were necessary as cushioning to prevent breakage of the mints and (b) that the net weight of contents was clearly and correctly stated on the exterior of the package—a point which up to now has in itself been adequate defense against a charge of deception.

The Federal District Court in Newark upheld Delson on both points and threw the case out. Now the Appeals Court has instructed District Court to reconsider—and in terms which leave little doubt that it expects the decision to be reversed. The opinion of the higher court noted that the Government had introduced "substantial uncontradicted evidence to show that purchasers of mints, opening the boxes, expected to find far more mints in them than there were."

Said the Appeals Court: "Safety considerations, before they can be held to justify a slack package, must be shown to be reasonably necessary in the light of alternative methods of safeguarding the contents."

Unless Delson can prove, in the rehearing, that there is no other adequate protective method to provide a less-deceptive package, its case is lost.

F&DA officials privately consider that they have won, even though this case may carry to the Supreme Court. After three losses and no wins in this type of court case, they are elated. They believe that they now will have both the authority and the funds to press their campaign in this third area of consumer protection, after previously being limited to questions of (a) public health and safety and (b) uncleanliness.

While F&DA jurisdiction is limited to foods, drugs and cosmetics, the same rules as to "deceptive" packaging can be applied by the Federal Trade Commission to any commodity shipped in interstate commerce. Consumer organizations are already agitating for such a broad-scale campaign.

Correct statement of contents—however legible—is no longer enough. It is now vital for every packager to review every package as to unessential unfilled space—and to be prepared to defend the package in court.

The Editors

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MODERN PACKAGING
MAY 1961 Vol. 34 No. 9 / THE COMPLETE AUTHORITY OF PACKAGING

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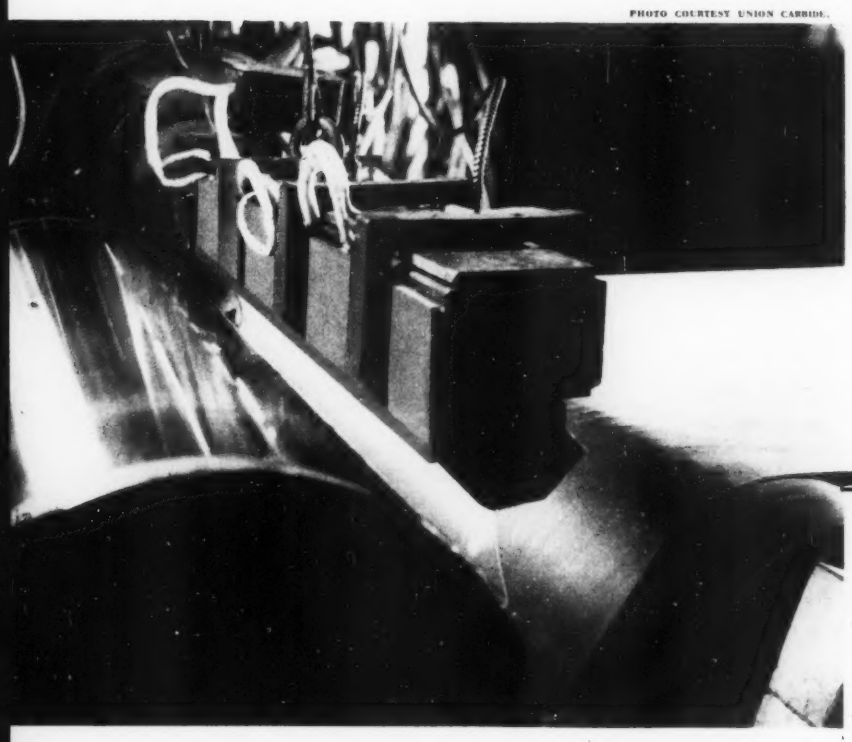
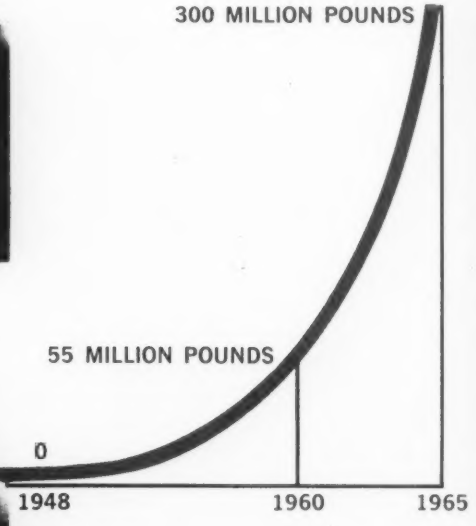




Bonding of plastics *to paper and other substances by the simple combination of the substrate with a molten plastic web shows increasingly active growth and may require the use of 300 million pounds of polyethylene by 1965.*

Extrusion coating on the rise

This proven method for adding barrier qualities and sealability to packages is now poised for multi-million-pound growth in all fields, following new developments in low-cost resins and faster coating techniques

Significant recent developments in the use of plastics for extrusion coating are opening up a world of new possibilities in packaging. The technique that once was limited to polyethylene on paper is now embracing other plastics and lending improved properties to folding cartons, fibre cans and corrugated containers, as well as aluminum foil, cellophane and plastic films.

Extrusion coating has suddenly become the favored method for adding barrier, heat-seal and high-gloss surfaces to almost any packaging substrate. So widespread is the practice, so varied its benefits and so all-embracing its product applicabilities that it behooves every packager to take a close look at what's going on and what's ahead in this important field of plastics packaging.

Pushed by the development of better coating resins and faster extruding techniques, this 13-year-old packaging midget is expected to sprout to giant size by the middle of this decade. And while polyethylene is—and probably will continue to be—the dominant plastic in this process, such

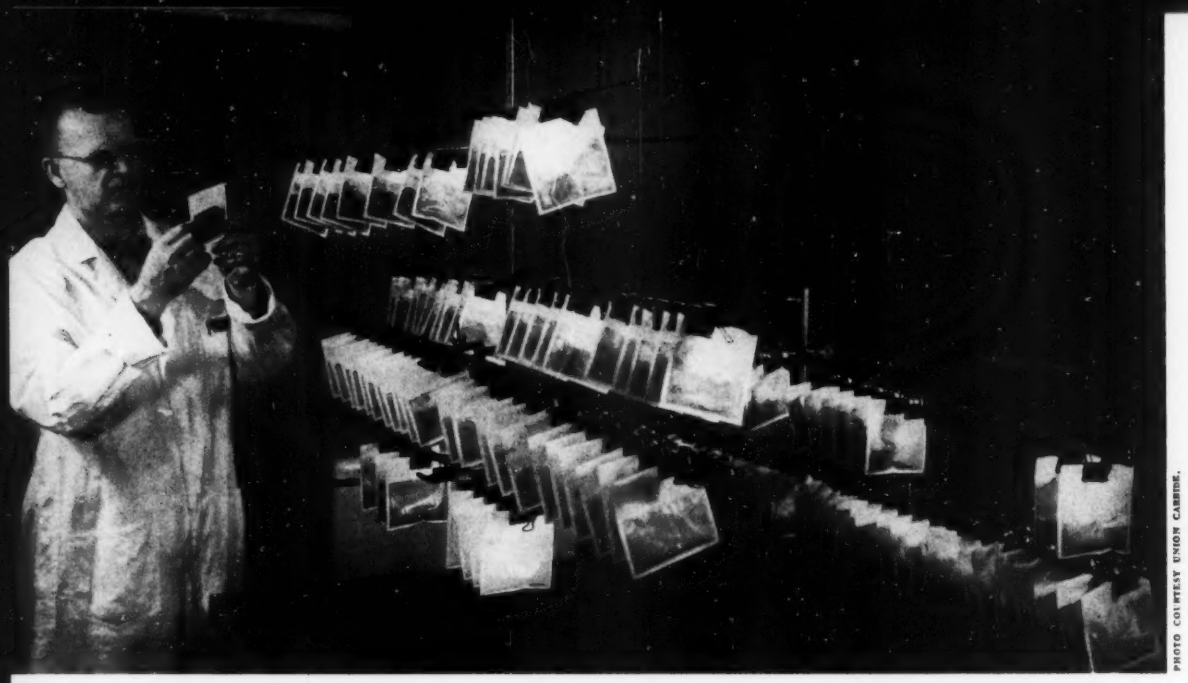


PHOTO COURTESY UNION CARBIDE.

Grease resistance *of developmental polyethylene resins is carefully measured by suppliers to gauge this functional property. Here, various oil-based substances are stored in polyethylene-coated paper pouches to check the shelf life and resistance to different fats.*

other resins as polypropylene and vinyl are now offering their special talents to the coating field by reason of their special properties.

Polyethylene

The application of polyethylene to paper and film is, of course, already well established in multiwall bags and pouch packages. The major growth over the next four years is expected to take place in cartons, trays and shipping containers for products of all types. The reasons for this are clear:

1. Cost of extrusion-coated materials is being steadily reduced by the development of specialized resins with lower prices.

2. Barrier properties have been heightened by the use of polyethylenes with higher densities.

3. Improved extrusion techniques and substrates now permit thinner coatings and faster manufacturing speeds, creating composite materials with optimum barrier or sealing properties at minimum uniform thickness and price.

Such improvements—the products of massive research and development by major resin suppliers and extruders—are expected shortly to push consumption of polyethylene resin for coatings to a figure greater than that for film today.

The rate of annual consumption may rise to 300-million pounds of polyethylene in coatings by 1965, according to *Modern Plastics* Magazine. This is greater than the quantity—200 million pounds—that was used in film last year.

By contrast, coatings took only 15-million pounds of polyethylene in 1954 and 33-million pounds in 1958. The figure for last year is estimated at 55-million pounds and for 1963 is projected to 100 to 150 millions, according to *Modern Plastics*.

Three properties of polyethylene make it valuable for use as a coating material:

1. It imparts to a package the characteristics of a good barrier to water vapor and grease.

2. It is easily heat sealed (or, in some cases, glue sealed) and also can be used as a "hot adhesive" to laminate two or more substrates together.

Additives enforcement extended to 1964

As predicted in the April issue of MODERN PACKAGING, the bill to extend for 39 months the deadline for compliance with the Food Additives Amendment to the Food, Drug and Cosmetic Act was rapidly passed by Congress and became law in April.

This extension gives a new deadline of June 30, 1964, to packagers or suppliers who are already testing materials or who have pending a request for extended testing. That date is a compromise between the "open-end" extension requested by F&DA and a two-year limit asked by anti-additive Congressmen during House hearings. Pending Congressional action on the extension, enforcement of the Food Additives Law had been suspended by F&DA since the original March 6, 1961, deadline.

3. It can provide an attractive, glossy surface on the outside of a package that also prevents scuffing of the substrate or printing.

While these properties overlap in many applications, they also are the basis, individually, for many uses in dairy, food and industrial packaging.

Milk cartons

Perhaps the most important function of a polyethylene extrusion coating is its barrier to liquids. It is this property that has led very recently to major use of this resin in milk cartons.

This packaging field, which consumes 15-billion units annually, is undergoing a sweeping change from the conventional wax-coated container to new polyethylene-coated cartons—despite present higher cost—because these plastic-coated cartons are said to improve greatly or solve the two current problems with milk cartons—leakage and wax flaking. So important are these benefits that experts predict 80-million pounds of polyethylene will be used annually in this field alone by 1963.

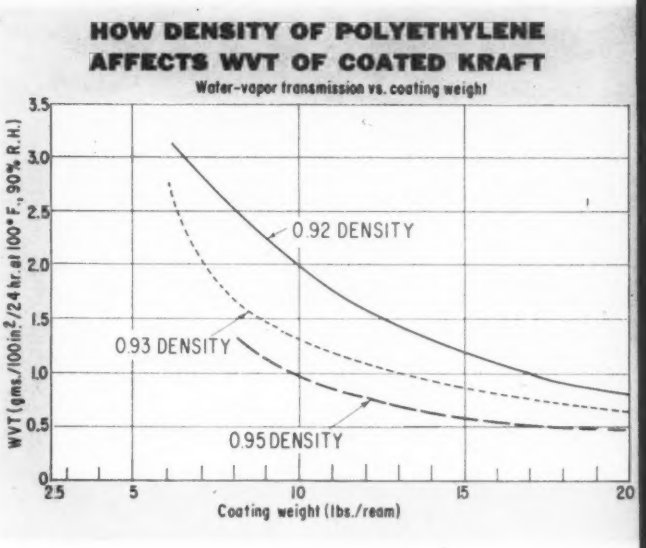
Utilizing either low- or medium-density polyethylene in the coating, the new cartons are now being marketed in half-pint to half-gallon sizes and one-gallon sizes should appear shortly.

Great attention has been paid to the technology of this package, for opinions of experts in the field differ on the best carton construction and the most efficient weight of each component.

Bakery trays

An entirely different barrier property of polyethylene—grease resistance—is expected to burgeon the use of this plastic with paperboard in bakery applications, primarily as trays, but also as full cartons for frozen bakery items and window cartons for sweet goods, cakes and pies.

In baked goods, the economics up to now have been unfavorable to polyethylene-coated boards and papers, these items costing up to 25% more than an equivalent package made from glassine-laminated or wax-coated materials. However, suppliers have found it possible to decrease the weight or the density of boards coated with plastic without affecting package performance. Some of these new materials now appearing are said to be competitive with standard glassine-laminated containers. Also, many experiments are being conducted on the use of medium- and high-density polyethylene coatings, which create high barriers at lower coating weights. Coatings on commercial tray packages in use today run from $\frac{2}{3}$ mil to 1 mil, but probably could be cut with the newly developed resins to 0.5 mil or less, thus offsetting the greater per-pound cost of high-density polyethylene.



There are other benefits for bakers from a polyethylene coating. It provides a glossy, attractive inner surface for a tray or carton and will not delaminate from the board. Also, it is said to prevent effectively offsetting of printing inks from the outside of a tray blank to the inner surface—an important point in view of the Food Additives Amendment. These properties are being utilized in a number of tray and carton packs, such as Sunbeam and

Milk cartons *coated with polyethylene show huge potential for growth, vary in construction from solid 15- to 20-point paperboard structures (left) with inside and outside coatings totaling up to 2¼ mils to a laminated paper and paperboard carton (right) with a special perforated tear opener that has a total polyethylene coating of 1.2 mils. Cartons (left) Ex-Cell-O by International Paper, (center) Sealright and (right) American Can.*

Bakery packages *have superior resistance to grease when internally coated with polyethylene. Glossy inner surface also presents a more attractive appearance for foods. Carton by Marathon.*

Holsum tray containers for brown-and-serve rolls and the pie carton for Pet Ritz.

For much the same reasons, polypropylene is under consideration as a bakery-package coating. It has greater resistance to fats and oils than polyethylene. But its price (43 cents per pound compared with 27½ cents for low- and medium-density polyethylenes) and difficulties in processing presently tend to limit its practical consideration.

Food cartons

Food packagers and their carton suppliers are looking with more than casual interest at the current tests by General Foods' Birds Eye Div. of a polyethylene-extrusion-coated, locking-type, single-wall carton (Marathon) for loose frozen peas.[1]

[1] See "Carton that Posts Frozen Food," MODERN PACKAGING, March, 1961, p. 92.

Heretofore, such containers have been made with glue flaps and have been used in limited quantity for specialty frozen foods. But it is generally conceded that if the Birds Eye package clicks, other large-volume packers of frozen fruits and vegetables will likely adopt similar containers immediately.

The merits of such wrapperless cartons have been previously cited,[2] but it is significant that the 16-oz. Birds Eye carton is being used despite its premium price—not only because of the convenience to consumers in easy opening and re-storage, but also because it eliminates the wrapping operation, a limiting factor on packaging speed in most frozen-food operations. Also, the external coating contributes scuff resistance and better appearance. Since Bird's Eye's packaging men feel that the ½-mil polyethylene coating is a good protective barrier, the other factors tip the scales in its favor.

However, this package will have competition from other polyethylene-coated containers—the pouch-in-carton pack and the lined carton (Crown Zellerbach, Fibreboard), which utilize an inner bag made of either film or plastic-coated paper and are particularly suitable for syrup-packed frozen fruits.[3]

Packers of dry foods have been slow to consider polyethylene coatings on barrier materials, mainly due to price. But converters are now gaining experience in handling extrusion-coated boards and the more economical thinner coatings plus surface treatments that permit fast glue sealing probably will open vast applications for such dry products as dehydrated foods, cake mixes and even cereals.

The first major food applications of this type

[2] See "Approaching the Single Wall," MODERN PACKAGING, March, 1960, p. 143.

[3] See "Pouch-In-Carton for Frozen Foods," MODERN PACKAGING, Oct., 1959, p. 144.

Gluable coatings *for carton interiors act as a barrier, but also permit rapid assembly and closing of container on standard packaging machinery. Such a coating is used to hold and protect these two new dog-food products recently introduced by General Foods. The glossy inner surface (illustrated above) also acts as a release surface for the product. Cartons by A. Geo. Schultz.*

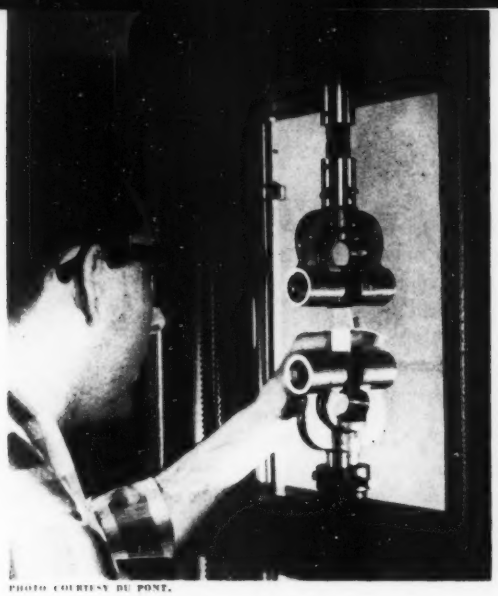


PHOTO COURTESY DU PONT.

Adhesion strength *of a polyethylene coating is very high, relieving packagers of the problem of delamination in the package. Such bonds between plastic and substrate are measured on an Instron tester, as in this determination of the adhesion between polyethylene and paperboard.*

Glossy outer surfaces *protect the delicate and colorful printing from scuffing and add a high shine that enhances design. Coating may also double as a barrier layer. Application of knife blade simulates effect of surface abrasion. Carton by Marathon.*

are two cartons with glue-sealable internal polyethylene coatings (A. Geo. Schultz Co.) for Gaines Meal and Chunk-Style Dog Food, now being test marketed on the West Coast by General Foods.

These 2-lb. cartons are made from 24-point clay-coated newsback board with a 1-mil coating of polyethylene on the inner surface. After special surface treatment (PG), the polyethylene can be glued with ordinary borated dextrin adhesives. These cartons are being run at standard speeds on the supplier's carton-gluing machinery and on GF's conventional filling and closing units—a great advantage for the glue-sealable coating.

While the package costs slightly more than a carton with a glassine inner bag used for a similar product, it is said to eliminate operating waste on the packaging line and is thus already competitive.

Shipping and industrial

One of the first big uses for polyethylene coatings was in paper for multiwall bags to contain many products requiring very high barrier protection. Now, suppliers are out to crack the lighter-barrier field. To do this, they have shifted the emphasis in specifications from the weight and type of resin used in coating—which means little to many packagers—to the functional properties of the bag. The theory is that packagers couldn't care less about what resin or thickness is used on bag paper so long as they get a package with adequate physical strength and with a specified water-vapor transmission rate. This point will have even greater validity as the medium-density resin, now generally used for bag coatings, is eventually joined by a host of other polyethylenes and even by other plastics.

Before specifications can be standardized, however, a good test method for water-vapor transmission is needed that can be run by all suppliers and packagers with consistent results from lab to lab. Such a test is now being correlated and standardized under the auspices of the Specialty Paper & Board Affiliates, a trade group including extrusion coaters. It will enable all extruders to identify their bag papers with a code number (to be used in conjunction with individual trade names, of course) that will identify their barrier properties.

One extruder and bag maker (St. Regis) now provides code-numbered papers with four levels of resistance to water-vapor transmission. Utilizing a special coating process designed to flatten the paper fibres and reduce by from 1 to 3 lbs. per ream the amount of polyethylene needed for an effective barrier, the papers used in these bags are reported to have scored packaging-cost reductions for such companies as International Salt Co.

At present, the effective minimum coating weights are about 4 to 5 lbs. per ream (about $\frac{1}{3}$ mil), but many extruders are looking hopefully toward coating weights as low as 2 lbs. and the use of high-density polyethylene (above 0.950) to give the necessary water-vapor barrier.

Such advances should also enable polyethylene coatings to gain much wider use in corrugated

shippers for fresh produce, fibre drums for chemicals and industrial wrapping papers, where its use of plastic is growing, but is still rather small.

Heat sealing and lamination

Another major use of the polyethylene coating—as a built-in adhesive or heat-sealing medium—also is undergoing significant growth. Because of its ease of sealing, the primary material here is low-density polyethylene. The biggest application is to pouch packages. Where the plastic is used primarily as a sealant, it also acts as a barrier.

In addition to its well-established use as a heat-sealable coating for cellophane and other films, polyethylene is gaining increased use with foil, where it also covers up pinholes in the substrate and adds an extra barrier against grease or water.

Gloss coatings

Use of polyethylene as an external coating for enhancing the eye appeal of cartons (where it also provides scuff resistance) has been growing more slowly than other applications—again because of cost. But new lightweight coatings are expected to change the picture. It should be reiterated that in such applications the coating frequently also has a barrier function, as in the instance of the Birds Eye carton used for frozen peas.

Some of the external coatings for cartons are heat sealable, but an increasing number are of the gluable type because such packages can be more easily fabricated on the regular standard glue-type carton makers and closers.

Notable recent examples of cartons with external polyethylene coatings primarily for upgraded appearance are those for Sugar Creek's whipped butter, Johnston's frozen walnut raisin bread and Brownberry Ovens croissant breakfast rolls. The first two containers have one glue flap and one locking flap for easy opening by the consumer. The croissant package has two locking flaps.

Here, the external coating not only enhances the colorful carton designs, but in the butter and bread cartons the coating also resists moisture and the deteriorative effects of low temperature.

What's ahead

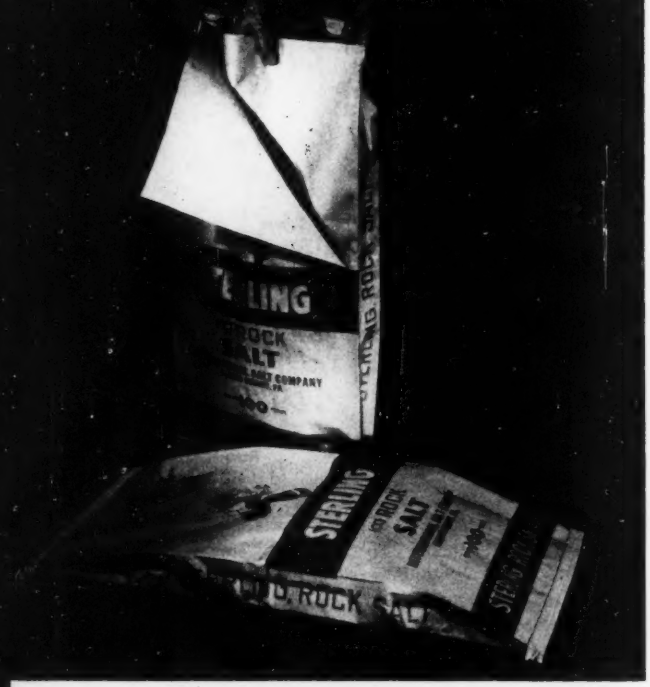
Other plastics are certain to challenge polyethylene in many applications, including low-molecular-weight, hot-melt polyethylenes, which are already in large-scale use. Polypropylene is the likeliest newcomer because of its high grease resistance. But water emulsions of polyvinylidene chloride (which are not extrusion coatings) provide such effective barriers, even in ultra-thin layers, that one extruding expert has declared: "If these materials are half as good as claimed, they will displace every other type of coating material."

While this statement appears sweeping—because of the widely different properties that coating materials must have to satisfy every packaging use—it does point up the exciting development and intense competition that will prevail in this specialized field of packaging over the next few years—a field that may encompass as yet undeveloped polyolefin plastics, extrusion types of polyvinylidene chloride and possibly other types of vinyl materials.

Since competition in the market today revolves mainly around product protection and package appearance and convenience, packagers must watch ever more closely the field of extrusion coating.

ACKNOWLEDGMENTS: In addition to suppliers identified in this article, acknowledgment is due the following companies for background information and assistance: E. I. Du Pont de Nemours & Co., Inc., Lowe Paper Co., Phillips Chemical Co., H. P. Smith Paper Co., Union Carbide Plastics Co. and U. S. Industrial Chemicals Co.

Multiwall bags, *one of the first containers to utilize polyethylene, are now fabricated with higher-density resins and a functional approach to specifications to boost barrier properties and cut costs. This four-ply carrier for salt has one layer of 50-lb. paper with a 1-mil coating of medium-density polyethylene that reduces bag price 2% and slashes WVTR 17% compared with a previous bag with a 6-mil coating of conventional polyethylene. Bags by St. Regis.*



Sanka's big sampling

An unprecedented operation is demanded to produce 11.7-million pouch packages for binding in the pages of two mass-circulation magazines

Flat-filled pouch *glued to advertising insert in a woman's magazine had to withstand a minimum of 1,000 p.s.i. Mechanical deflaters had to be mounted on filling machines to extract air and to flatten the bags prior to sealing.*

In the biggest direct sampling ever attempted through magazine pages, General Foods is giving away $1 million worth of Instant Sanka Coffee in sample packages actually bound into 6.7-million copies of *Every Woman's Family Circle* and 5-million copies of *TV Guide*—a total of 11.7-million samples glued to specially prepared advertising inserts with a coupon offer.

The tremendous detail and ingenuity involved should be of significant interest in this day when packagers are called upon to tackle almost anything.

The sampling project is part of an advertising campaign to introduce an improved Sanka blend and a redesigned label for the regular glass jar.

A flexible pouch, printed with a colorful facsimile of the redesigned jar, was needed—one that would be strong enough to withstand the extreme pressure required during the binding of the magazines (a minimum of 1,000 p.s.i.). It also had to hold flat, without shifting, a maximum quantity of product, yet not be too bulky for bind-in.

The pouch structure selected is made up of 30-lb. calendered bleached kraft, 15 lbs. of polyethylene, 0.005 aluminum foil and 30 lbs. of polyethylene. It withstood 3,000-lb. compression tests.

Pre-formed pouches were made to hold approximately four teaspoonsful of coffee. Test packages were filled and sealed at the company's Franklin Baker Div., in Hoboken, N. J., and at its baby-food plant in Albion, N. Y. These packages were turned over to a contract packer who glued them to the inserts in a pattern designed for automatic feeding in the magazine binderies. Latex adhesive was used to assure easy removal of the pouch. For easy opening, a special tire-cord rayon tear string had to be provided to tear the strong pouch material.

The problem of filling the pouches so that contents would not shift and bulk too thick in the magazines was overcome by mounting on the filling machines mechanical deflaters, consisting of steel plates with foam-rubber pads, to extract air and flatten the bags prior to the sealing operation. The tendency to bulk is further lessened by control of the filling-machine augers and by reducing the flow to get a gradual drop of the product.

Special packing cases and case-loading techniques were devised to assure that finished pouches would be kept in a horizontal position at all times during transport to the magazines' binderies.

SUPPLIES AND SERVICES: Pouch material by Riegel Paper, 260 Madison Ave., New York 16. Pre-formed pouches by Cellucraft Products, New Hyde Park, N.Y., using Du Pont rayon tear string. Mounting of pouches to inserts by Dyn Corp., Cliffside Park, N. J. Jar redesign, Lippincott & Margulies, 430 Park Ave., New York 22.

TEAR-OPEN

Kraft Foods' introduction of five cheese products in easy-open, two-piece, shallow-drawn aluminum cans is significant to suppliers, packagers, retailers and consumers for these reasons:

1. Designed to appeal to convenience-conscious housewives, it is the first metal can in production with a successful easy-opening top. The external tab and tear strip are an integral part of the lid. This eliminates can openers, leaves a clean edge, permits reclosure and provides a re-usable container. Another type of tear-open device for aluminum lids does not allow for reclosure.

2. Kraft is able to fill and seal the container at a speed 35% faster than output in its former fluted foil cups with inset paperboard lids.

3. The new container is said to be stronger and

Tab zips off *Kraft Foods' new aluminum can without use of can opener, leaving a clean edge and unlabeled body that permits cheese products to go to table in new fluted container. Interior is coated with clear vinyl; exterior, with vinyl varnish in one of five solid colors reflecting product flavors.*

ALUMINUM CAN

Pull tab that replaces the can opener removes lid to provide reclosable table-ready container for Kraft cheese products packed in aluminum shells drawn from pre-coated coil stock

more dent-resistant than the foil cup. Its tapered body and recessed lid permit stacking of the product in refrigerated display cases at retail.

4. While initially it costs more than the foil cup, the greater production speed and lower damage ratio reduce unit packaging costs and, reportedly, make this can competitive with tinplate.

This hermetically sealed can is being used by the Kraft Foods Div. of National Dairy Products Corp., Chicago, in an 8-oz. size for four different varieties of its ready-to-serve cheese dips and in a 4-oz. size for its whipped cream cheese.

Bodies of the cans are supplied to Kraft with curled flanges. Lids are crimped to the bodies after having been filled on standard equipment. When the tab is pulled, the lid's lower edge is removed, severing the connection with the body. However, the lid is sufficiently countersunk to act as a tight plug even without its lower edge. This positive reclosure is especially advantageous for Kraft products. Unused product may be returned to the refrigerator without dissipation of its delicate flavor or absorption of other food odors. The container's protective qualities, even after opening, have permitted Kraft to increase the volume of contents of the cheese-dip packages from the former 6 oz. to a more practical 8-oz. size.

Both body and cap are fabricated by the supplier from coiled aluminum can stock. The fluted body is pre-coated on the inside with clear vinyl and on the outside with pigmented modified vinyl in one of five solid colors. Since it carries no brand name or other printed message, it resembles a brightly colored bowl when the lid is removed and is suitable for immediate use on the cocktail tray.

The lid, lithographed in four colors plus varnish, carries all brand and product information, weight, price, etc. Container colors chosen by Kraft reflect the flavors offered—royal blue for bleu cheese, emerald green for dill pickle, bright orange for bacon-horseradish, rich brown for onion, and silver for whipped cream cheese.

The result of two years' development work, the new container can be produced in several different diameters and in heights ranging up to $3^{3}/_{8}$ inches. The easy-open aluminum lid may be combined with can bodies of other materials.

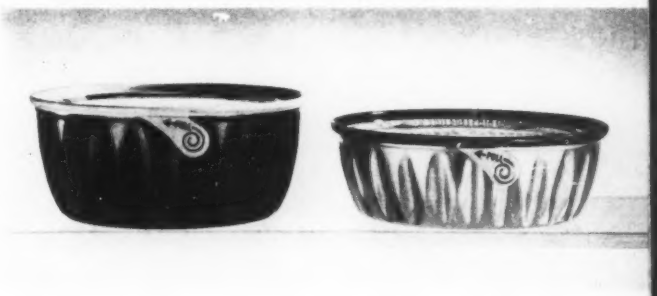
At Kraft, six cans of a variety are packed in a tray of 22-point bending chipboard that slides into a sleeve of 30-point vat-lined chipboard. The sleeve top has six 2-in. die-cut holes to permit quick and accurate price marking without removal of the cans. Four six-can trays are packed in shipping containers so that wholesalers may supply smaller stores with less than full-case orders when desired.

The cheese dips, all packaged at Kraft's Beaver Dam, Wis., plant, are going into national distribution immediately. Whipped cream cheese will appear first in about a dozen markets and then distribution will expand gradually as production allows.

Kraft is excited about the merchandising potential of its all-aluminum can. There is a strong possibility that the can will be used for other Kraft products and the container will almost certainly be adopted by other food processors.

SUPPLIES AND SERVICES: Aluminum can, tear-strip lid and closing machine by Central States Can Corp., Massillon, O., using can-fabricating equipment developed by E. W. Bliss Co., Canton, Ohio, and Kaiser aluminum, with vinyl coatings by Stoner-Mudge Co., Div. American-Marietta Co., Pittsburgh 33.

Shallow container *for whipped cream cheese holds 4 oz., compared with deeper can for 8 oz. of cheese dips.*



Downyflake's deep-drawn bake-in tray for frozen muffins is a combination of structural and mechanical achievements that maintain package rigidity from first handling to final use

Multi-cavity

A convenience package that "couldn't be made" is helping Downyflake Foods, New York, toward achieving outstanding sales success with a line of frozen, ready-to-bake muffins.

The container, which closely resembles an ordinary metal muffin pan, is a semi-rigid aluminum-foil bake-in tray with six deep-drawn (about $1\frac{1}{4}$ in.) cavities. More than that, it is a tribute to those advances in materials and in supplier-industry technology that today can turn the glint of any practical packaging idea into a shining reality.

Downyflake, a subsidiary of DCA Food Industries, first envisioned the self-selection potential of packaged frozen muffins in 1956. It took some three years to develop a prepared mix that would retain its flavor, freshness and baking qualities for indefinite freezer storage. With this obstacle surmounted, the idea of a foil pan followed naturally. But the company's problems were just beginning.

After setting up a package-cost factor commensurate with a fast-turnover, low-price supermarket product, Downyflake approached a number of aluminum-container suppliers with its proposed new deep-cavity tray. The substance of their reaction: "It can't be done. You can't deep draw thin-gauge aluminum foil without the multiple cavities pinholing or collapsing—nor can you do it at the price you quote." But the packager persisted and eventually was able to persuade a major supplier of aluminum foil to tackle the job.

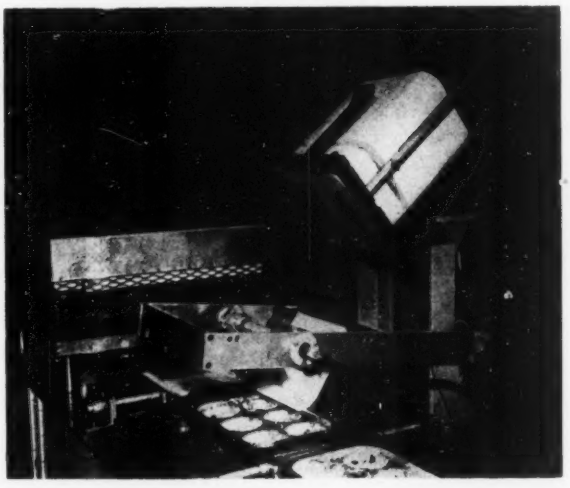
Result: It was done. Although details on the deep drawing of this pan are restricted information, the Downyflake package as finally developed is of 0.003-in. foil, rigid enough to support multi-tier stacking when filled. Stamped-in circular ridges and other ostensibly decorative elements add to its rigidity. Pinholing, which occurred in earlier, thinner-gauge models, is no longer a problem, the company says.

Downyflake is now marketing four varieties of foil-pan-packaged frozen muffins (Corn, Honey Nut, Raisin Bran and Blueberry) in virtually every major supermarket in the Northeast, beginning with a New York City debut last fall. Acceptance has been so enthusiastic, reports vice president and general manager Herbert R. Koff, that plans are under way to expand distribution nationwide. As for economy, Mr. Koff notes that total packaging-material cost (including a six-color-printed waxed paperboard lid) is comparable to that of conventional foil-laminated paperboard bake-in containers.

To keep pace with existing and anticipated product demand—and to hold costs to a minimum—the frozen-muffin packaging line at Downyflake's plant in Chickasha, Okla., is entirely automatic. (Formerly, several packaging operations were not done automatically.) The swing to automation, together with a few simple modifications in container-handling procedures, have stepped up packaging speeds from 35 per minute to a present 50 per minute.

In Downyflake's single automatic line, empty foil pans are carried right-side up through a greasing station, after which they are deposited on a conveyor for two-at-a-time travel under the filler. The

Lid depositor *provides gentle and accurate placement of covers inside flanges of foil pans passing underneath. Vacuum cups on rocker arm pluck lids from magazine and carry them down into proper position. Pan flanges then are lightly pre-crimped to keep lids in place for final crimp closing at left.*



foil pan

Unconventional construction *of Downyflake's foil package presented some touchy fabrication problems. Deep-drawn foil tray, made from 0.003-in. foil, has stamped-in ridges and decorative elements for added rigidity. Pinhole-free 1¼-in.-deep cavities are produced in a mechanical operation that builds in rigidity needed to handle containers at packaging-line speed of 50 per minute. Wax-coated lid (left) is made of stiff 30-point board to protect the product from flattening in multi-tier stacking.*

pans formerly were conveyed with their short sides (two-cavity face) forward under a four-head filling unit. Filling speeds have been increased 50% by having the pans travel with their wider sides (three cavities) first under a newly installed six-head filler.

After filling with the viscous muffin mix, the pans are accumulated in a single line for the trip through a two-station lidder and closer machine. To guard against crumpling of the deep-drawn foil containers, the machine has been modified to provide gentler handling at the infeed end and at the crimping die. An automatic lid depositor and pre-crimper attachment performs rapid, accurate placement of colorful paperboard lids on each pan prior to the final crimping. The attachment includes a magazine containing a supply of lids loaded face down. As a pan travels underneath, a rocker arm equipped with vacuum cups comes up, plucks a lid from the magazine, then swings back down and gently releases the lid (face up) squarely inside the flanges of the container. At the same time, light side-crimping pressure is applied, to assure positive lid placement. The split-second operation repeats itself each time a pan comes into position under the lid depositor.

Final crimp sealing, performed immediately after lid placement, completes the packaging job. The filled and sealed pans are then quick frozen—an operation facilitated by aluminum's excellent cold conductivity—and packed 12 to a corrugated shipper. Divider partitions and cushioning material cradle the case-packed foil pans for protection against handling damage during frozen shipment.

Downyflake gives much of the credit for the successful launching of its ready-to-bake muffin mix to the stiff 26-point paperboard lid which has been developed especially for the deep-drawn foil container. Wax coated on both sides, the protective lid is reported to provide the rigidity needed to keep the mix from flattening in the pan under the pressure of multi-tier stacking.

For family identity, basic rotogravure-printed surface design developed by the company's advertising agency, Smith Greenland, is the same for each of the four varieties of Downyflake muffins: backgrounds are color coded to help shoppers identify among the products. Illustrated baking instructions are printed on the reverse side of the lid.

Knowing when it has a winner, Downyflake already is making plans to add new varieties to its frozen-muffin line. And the company is merchandising its foil pan solidly—through TV, newspapers and point-of-purchase material—to take advantage of a six-month head start on potential competitors.

SUPPLIES AND SERVICES: Foil pan and lidding and crimp-sealing machinery by Kaiser Aluminum & Chemical Sales, Oakland, Calif. Printed paperboard lids and shipping cartons by Container Corp. of America, 38 S. Dearborn St., Chicago 3.

NOW

BEFORE

Family look for milk

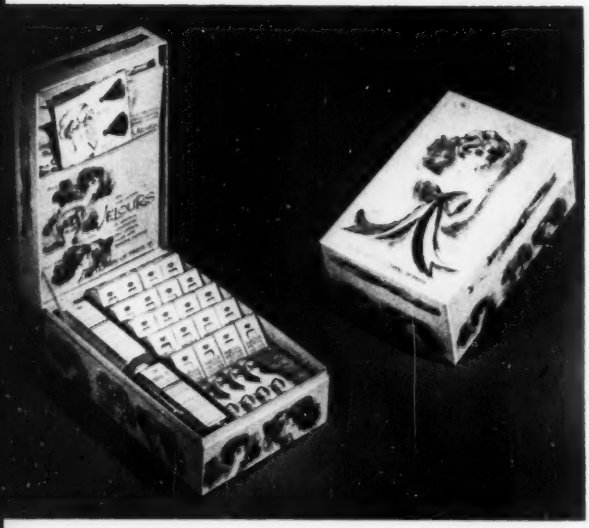
Sharply upgraded self-selection value—reflected in a reported sales increase—has been achieved by Roberts Dairy Co., Omaha, via a sweeping redesign program for a line of milk cartons. The instantly identifiable family of color-coded packages is a dramatic departure from the former line, whose sole unifying element was the Roberts logo.

In the redesign, copy has been simplified and extraneous decoration has been eliminated from the facing panel, giving emphasis to brand name and basic product data. A highly visual new trademark is calculated to strengthen brand remembrance while suggesting a quality appeal. It consists of the company name in bold block letters alongside a distinctive "tree of life" symbol. Broad horizontal stripes across the bottom of each carton accentuate the family look.

Carton background colors, says the packager, are "psychologically" keyed to contents. For example, light blue is used for skim milk; deeper blues appear on the cartons for milk with greater vitamin fortification. Rich homogenized or cream-top milks are identified by a maroon background and sour products (such as buttermilk) are keyed in green. *Redesign by Thomas Lauter & Associates, Sausalito, Calif.*

Ideas in Action

Economy in multicolor design, with a quality look



How fine multicolor printing effects can be had even on a limited packaging budget is dramatized in a pastel-toned "French motif" cover paper for a set-up box being used by L'Oreal of Paris, New York, to introduce a line of professional hair-care products to beauty-shop operators.

For reasons of economy, surface-design elements on the box were confined, in the planning stage, to line reproductions and only three basic colors: red, blue and yellow. The problem: With these restrictions, how do you achieve the subtle appeals of quality and high style which are so important in the merchandising of professional beauty products?

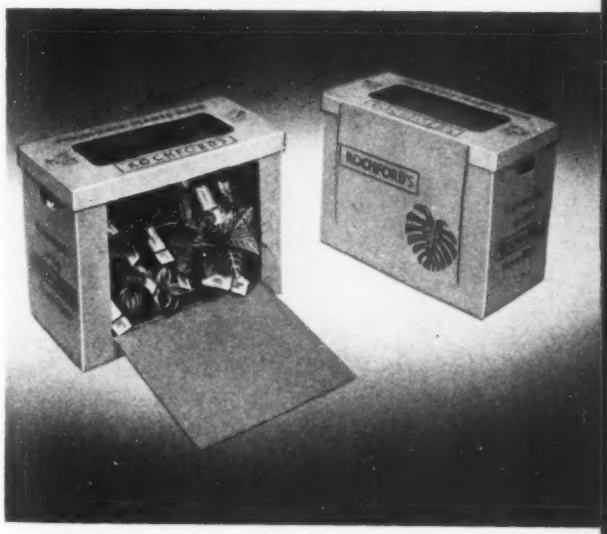
As devised by L'Oreal's advertising director, Nell Lee Litvak, the solution was to use angled veloxes of the artwork for reproducing the design on automatic printing equipment. This technique permitted overlapping and blending of the three basic colors to attain a rich multicolor effect. Cost of the box, says the packager, is only a little more than one third of what it would have been with conventional process plates for multicolor design. *Container by Martin Paper Box, 346 Carroll St., Brooklyn 31. Lithography by Moe Zuckerman, 30-27 31 St., Long Island City 6, N. Y.*

Triple-duty shipper eases packing, upgrades display appeal

Designed for display appeal and packaging efficiency as much as for its primary function of product protection is an interesting new corrugated container adopted for potted plants by Thomas Rochford & Sons, an English florist. A drop-down flap on the front of the carton serves a double purpose: It permits quick packing of the plants without risk of damage to blooms or foliage; at retail, the flap is lowered to display the contents without removing them from the case. A tight-fitting telescoping lid holds the drop-down flap in upright position during shipping and other handling. The lid also has a broad film window that affords constant visual identification of the plants inside.

A corrugated platform insert with a number of scored and die-cut circular "nests" holds the potted plants securely in place and separate from each other in the carton, to guard against breakage or other damage during shipment.

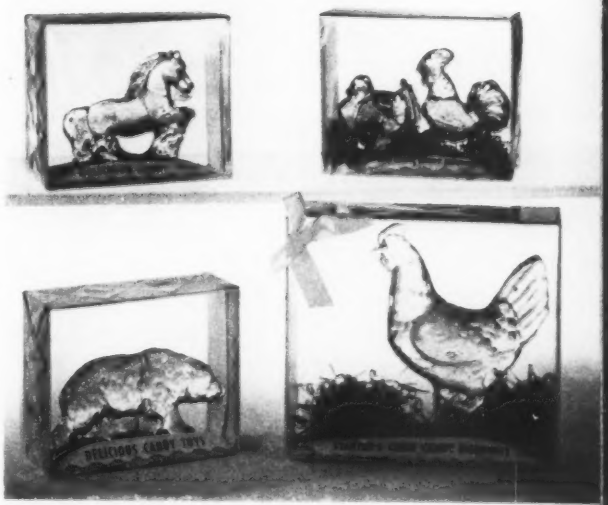
Die-cut hand holes in the sides of the locking-base container (which is set up without using tape or staples) facilitate carrying and also assure that the carton will be handled in upright position. *Container by Bowater Paper Corp., Knightsbridge, London S.W.1, England.*



Frame-carton 'showcase' doubles sales of candy novelties

Packagers seeking new ways to increase the self-selection appeal of popular-priced products will be interested in a simple but ingenious "showcase" container that has paid off handsomely for Startup & Sons Candy Co., San Gabriel, Calif. The new package—which consists of a rigid paperboard frame and a snug-fitting unprinted cellophane overwrap—reportedly has more than doubled sales of the company's line of molded hard-candy animal figurines. It offers full product visibility from the back or front.

Product and brand identity on Startup's candy package are confined to the paperboard frame, which is folded over to provide triple-thickness side and top walls. During the packaging operation, the unglued bottom folds are lifted up and snapped over the base of the candy figurine, to keep it securely in place. Copy printed on the lift-up bottom folds offers additional identification when the package is viewed head-on. A semi-automatic machine applies the moisture-resistant cellophane overwrap, which is heat sealed on opposite sides of the frame. *Wrapping machine by Schooler Mfg. Co., Pacoima, Calif., using Du Pont cellophane. Printed frame by Royal Paper Box, 960 E. 61 St., Los Angeles 1.*



In a package-redesign program that upgrades sales appeal while cutting costs 15%, Porter-Cable stimulates a flood of ideas by bringing its container manufacturer into the corporate packaging program

The supplier takes

What are the values of bringing in a representative of your container-supplying firm as a working member of your company's packaging team? At the very least, it makes for more effective liaison. And it may lead to a general improvement in packaging efficiency that can pay off in dramatic cost savings and greater sales appeal.

An eye-opening example of the benefits of such cooperation is provided by the case history of Porter-Cable Machine Co., Syracuse (600 employees; $15,000,000 gross sales.) This well-known manufacturer of portable electric tools and gasoline-powered lawn and garden equipment for the home handyman reports that a primary decision to include a supplier representative on its packaging committee has been a major factor in the success of a package-revision program that so far has:

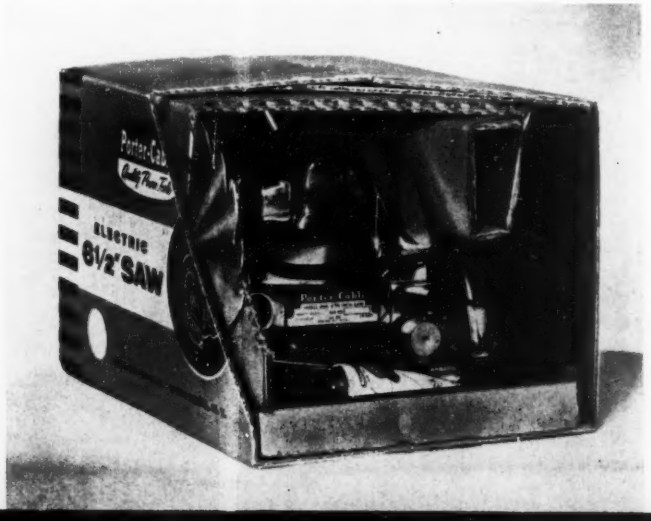
- Cut over-all packaging and shipping costs some 15% via standardization and simplification, including the elimination of more than 50 packages and the re-engineering of problem products for packing in smaller containers designed for ease in handling.
- Established strong family identity for a wide variety of machinery items in nearly 500 different corrugated shipper-display cartons.
- Upgraded the functional and protective properties of packaging throughout the line.

The story of how these results have been achieved (in a program that is continuing today) can serve as an example to packagers in any product field, whether for consumer or industrial use.

It all began in 1958, when Porter-Cable management decided it was time to modernize a makeshift packaging arrangement. The need was obvious. The company was producing a broad diversity of products, many of different sizes and shapes. There was a total lack of design unity on the drab corrugated cartons—supplied by a platoon of different container manufacturers—in which the products were packaged. Manufacturing was characterized by small production runs, with shipments varying from carload lots to single units. To complicate the prob-

Comparison *of new (upper) and old (lower) cartons for similar products shows graphically how Porter-Cable's supplier-guided repackaging program has resulted in reduced board costs while building new sales appeal for products.*

Snug arrangement *shown in cut-away view demonstrates how product and package re-engineering provide a compact, low-cost carton for a power saw. Note the simplicity of corrugated insert, which is reported to offer protection against shock comparable to former intricate container.*



a hand

Supplier member *of company packaging committee gets thorough briefing on all phases of Porter-Cable's production operations as part of project to improve packaging. Here, Harry Carr (right), representing the supplier firm, discusses a line of power tools with Robert McMahon of the Porter-Cable manufacturing department, also a committee member.*

lem further, the company had just expanded its line to include riding lawnmowers, which required an entirely different approach to production, packaging and distribution than was used for other, smaller products in the line.

With these problems in mind, Porter-Cable set up a company packaging committee consisting of executives from every department within the company having any concern with packaging.

The committee evolved as an eight-member group, representing manufacturing, marketing, engineering, purchasing, finance, service, transportation and advertising. The committee's first accomplishment was to clarify the company's packaging goals, which were distilled to a list of six vital objectives:

1. Promote a favorable and consistent image for all of the Porter-Cable products.

2. Gain brand acceptance for the company's products through uniform design.

3. Provide greater merchandising appeal.

4. Standardize packages for the company's lower-priced tools and accessories.

5. Consider the development of appealing design features, such as carry handles for containers and self-contained display packaging.

6. Reduce packaging costs while maintaining the maximum in shipping standards.

Next problem: How to translate these ideals into reality in the shortest time and with the greatest efficiency? After investigating various sources of professional help, the committee agreed that the best and most economical way to handle the company's packaging problems would be through the advice and counsel of one capable supplier.

Porter-Cable called in seven corrugated-container supplier companies for briefing on the problems and objectives. They were told that the firm which came up with the best integrated program would get the packager's entire business for one year. In addition to price quotations, they also were asked to submit ideas on effective design and service.

Through this process of creative selection, Porter-Cable took its first big step toward the goal of a coordinated packaging program.

It should be noted that the policy of concentrating on one supplier is contrary to the practice of most

Packaging-committee members *hear Mr. Carr explain a new design concept. Committee members are (l.-r.): David Ridings, sales-engineering manager; E. L. Tabat, vice president of marketing; Ralph Hook, transportation manager; Raymond L. King, director of purchasing; M. V. Nodar, sales development manager; R. R. Gowcey, treasurer; Robert Ingraham, customer services manager; Robert McMahon, manufacturing.*

packagers, but officials at Porter-Cable feel that the bold experiment has paid off well.

The supplier selected by the packaging committee was told that it would have a free hand in solving Porter-Cable's packaging problems, within the framework of basic company policies. To facilitate packager-supplier communications, an executive representing the supplier firm was called in to participate as an active member of the packaging committee meeting with the group on a regular basis.

Because Porter-Cable felt that supplier familiarity with every phase of its operation was essential to the success of the repackaging program, it gave the representative extensive briefings on all products; thoroughly explained manufacturing, assembly and shipping procedures, and outlined typical dealer set-ups in detail. Besides these original briefings, the company agreed to keep the supplier informed on all operations affecting packaging — including engineering, shipping, manufacturing and sales promotion. The supplier also was to be kept abreast of all new and proposed products, and was invited to visit the Porter-Cable plant to observe the production and packaging operations.

The first tangible result of this cooperative program was the development by the supplier-company's art department of a new and highly visual family design for all corrugated cartons in the packager's line. Printed in two colors on brilliant white linerboard, the new design (selected from 20 submitted to the packaging committee) converted what was formerly a strictly utilitarian shipper into an appealing point-of-purchase display piece.

Surface-design elements common to all new Porter-Cable packages include: a restyled logo,

RULES FOR PACKAGER-SUPPLIER LIAISON

In Porter-Cable's packaging-committee set-up, close cooperation between packager and supplier means just that. The development of a lower-cost, more effective packaging program demands that each party adhere to well-defined responsibilities. Here is a basic guide, developed from Porter-Cable's experience, which can be helpful to any company that is thinking of making room on the packaging team for a supplier-company representative.

THE PACKAGER SHOULD:

1. Make the supplier's man an integral part of its packaging operation by putting him on the packaging committee.

2. List all packaging objectives so that the supplier knows what course to follow.

3. Brief the supplier on all phases of your operation that directly or indirectly affect packaging.

4. Keep the supplier informed of new developments in products, modifications and style changes.

5. Give the supplier company a free hand in the development of package design and construction.

THE SUPPLIER SHOULD:

1. Provide competent personnel to work with the packaging committee.

2. Offer assistance in package-testing programs.

3. Keep the packager informed of all pertinent packaging developments, even those outside its own field of interest.

4. Assist the packager in making arrangements with suppliers of other materials.

5. Help the packager make arrangements with sub-suppliers whose products (steel strapping, wooden skids, etc.) may be necessary to the development of the final package.

prominent on the carton face; succinct product description, printed in bold block lettering (red for portable tools, green for gardening supplies) against a white strip background on front and side panels; a simple product illustration inside a circular, contrasting-color spot and distinctive black "hashmark" striping on the left side of the front panel.

But surface redesign, important as it is to Porter-Cable's marketing picture, was only one phase of the package-revamping program. Many of the recommendations made by the supplier representative after inspection of the manufacturer's production and packaging lines have resulted in the development of lower-cost, more efficient containers. Some of these recommendations have required simple modifications in product design.

Example: Among Porter-Cable's gardening equipment is a suburban lawn tractor, which was formerly shipped fully assembled. The supplier's suggestion that the wheels be detached so that the item could be packaged in a smaller shipping carton now enables the manufacturer to load 27 more tractors per box car than was formerly possible. Savings in packaging material and shipping costs are impressive. Similar economies were achieved following a supplier recommendation that the packager's riding lawn mower be cartoned with its handle detached rather than as a fully assembled unit.

There are numerous other examples. A circular power saw, for instance, had always been shipped with the blade attached. The supplier's suggestion that the blade be removed for shipping resulted in a substantial reduction in the size of the container, with all the attendant economies.

Supplier participation in the repackaging program has cut costs and upgraded the functional value of containers in numerous other ways, Porter-Cable says. Standardization of cartons for lower-priced tools and accessories has eliminated more than 50 packages from the company's inventory. Most tool cartons are now [*Continued on page 201*]

SUPPLIES AND SERVICES: Package-redesign program and corrugated containers by Lawless Bros. Container Corp., North Tonawanda, N. Y.

Family identity, *a major objective in the tool-manufacturer's repackaging program, offers new point-of-purchase appeal to some 500 items in corrugated shipper-display cartons. The container supplier developed this new surface design, recommending two-color printing on white linerboard for greater visual impact.*

Spectacular saving *in board requirement was achieved when the supplier suggested that Porter-Cable redesign the handle on its electric grass trimmer so that it could be dismantled as shown, for packaging in a smaller carton. An awkward carton nearly twice as long was needed to accommodate former one-piece handle.*

COTTAGE CHEESE IN POUCH-PACK

Consumer convenience and extended protection are behind Sealtest's novel idea of sealing single servings of this perishable product in polyethylene-coated paper

Cottage cheese has joined the growing ranks of food products in single-portion packages. In this convenient form it has just been introduced in four different sizes of packages by National Dairy Products' Sealtest Division, New York.

This important packaging first—using polyethylene-coated paper pouches packed in a waxed folding carton—is another good example of what can be done with packaging ideas imaginatively adapted from other product categories.*

Sealtest is test marketing the flexographically printed pouches in the Winston-Salem area and distribution may very well be expanded soon. While all packaging specifications have not yet been made final, there are signs that single-portion cottage cheese is here to stay. Consumers reportedly are trying out the new idea with enthusiasm.

In addition to household convenience in portion use, there are other marketing possibilities. The pouches lend themselves to picnic and lunch-box use, for which bulk-packaged cottage cheese has never been suitable. And there is a strong institutional potential for restaurants, hospitals, industrial plants and other mass-feeding locations.

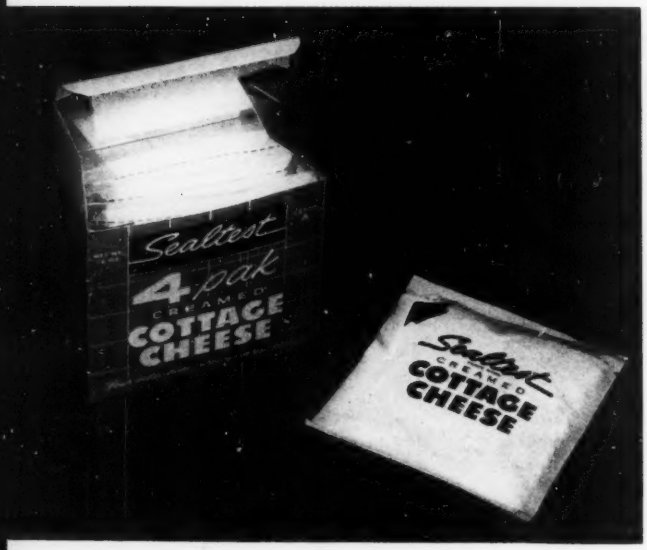
Perhaps more important, the new package eliminates common sources of cheese contamination and hence is believed to increase the shelf life of this highly perishable dairy product.

From a packager's viewpoint this pouch is significant in that it (1) may cost no more than conventional waxed paperboard or plastic tubs per pound of product and (2) should equal or better the present hourly output of tubs as soon as automatic filling and sealing equipment is developed. A speed of forty to fifty 1-lb. tubs per minute is considered standard. When automatic equipment for the new packaging is available—and no undue problems are expected—output of about the same number of pounds per minute should be easily achieved. The pouches are now being filled, heat sealed and cartoned manually.

Fabricated from 32-lb. paper extrusion coated with 2 mils of polyethylene, the new package was developed by National Dairy's Research & Development Division in Glenview, Ill. Currently, the pouches are plain white with a minimum of one-color copy, namely, "Sealtest creamed cottage cheese" and tear-open instructions. It is possible that recipes or other copy may be added.

Pouches are presently bought pre-formed and

* See "Idea Exchange," MODERN PACKAGING, Dec., 1959, p. 95.



Reclosable tuck flap, *waxed folding carton holds four to eight single-portion pouches, depending on size. White polyethylene-coated paper containers have sanitary appearance suitable to dairy product.*

PORTIONS

Pouch tears open *along bottom edge of heat seal, allows neat spooning of cottage cheese. Easy-open notches are provided by supplier. Sealtest fills and seals at bottom of pouch.*

need only a fin seal at the bottom after filling, but automatic equipment may demand a different pouch style, or pouches may be formed from roll stock.

To obtain as broad a base of consumer reaction as possible, Sealtest is offering four package sizes. Sealtest originally believed that 4-oz. servings would be best, but research indicated this might be too much. So some 1-lb. cartons contain four pouches of 4 oz. each and others have five pouches of $3\frac{1}{5}$ oz. each. There are also a $\frac{3}{4}$-lb. carton of four 3-oz. pouches and a 2-lb. carton of eight 4-oz. pouches. The final decision on portion sizes and the quantities to be packed per carton will be made at the conclusion of the Winston-Salem test.

Shelf life for conventionally packaged cottage cheese varies from eight to 15 days, depending on conditions under which it is made and stored. Lack of refrigeration or other poor treatment of the product can still cause spoilage even with the new package, but the new pouches eliminate many of the common spoilage factors. They shut out air, prevent contamination from spooning and encourage constant refrigeration until serving time. It is reported that single servings may add several days to the palatable life of the product, though shelf-life tests have not yet been finally completed.

Since the WVT barrier is in the pouch and not in the carton, Sealtest is using a simple reverse-tucked folding carton to facilitate hand packing.

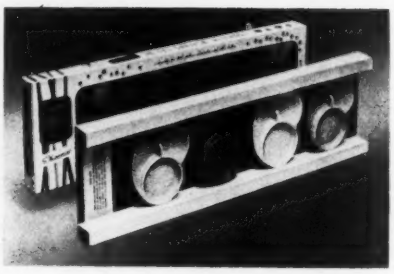
The present carton is of 18-pt. paperboard with a waxed surface. Graphics follow Sealtest's familiar pattern. No illustration of the product appears anywhere on the carton, which makes its ready acceptance by consumers all the more impressive. Usually a good deal of educational effort is thought to be necessary to school users in a completely new packaging concept. However, consumers have become accustomed to individual pouches for other types of products and the new package has been backed by an extensive program of local advertising.

SUPPLIES AND SERVICES: Polyethylene-coated paper pouches by Continental Can's Flexible Packaging Div., Mt. Vernon, O. Waxed folding carton by Diamond National's Gardner Div., Middletown, O.

1

PACKAGING PAGEANT

1 A twofold problem had to be overcome in selecting the plastic material for Coty's new "Duette" case containing a full-size powder compact with a full-size lipstick concealed in the hinge of the case. The plastic had to be light in weight so as not to overburden a woman's purse and durable enough to provide a stronge hinge that would not crack. Selected after testing several materials was a special-formulation polystyrene in a lustrous pearl white, which proved flexible enough not to break under strain. Fitting the metal-swivel lipstick into the compact's hinge added strength to this much-used area of the cosmetic case. Design, Eric de Kolb, New York. Case molded by Morningstar, Inc., Cambridge, Mass., using Dow's Styron 475 plastic.



2

2 Product protection and consumer convenience are combined in Shawnee Potteries' new carton for a coaster-ashtray set. Four pottery coaster-ashtrays are cemented to a paperboard insert, securing them against movement and breakage. When pulled free, paper remains stuck to the bottom of the ashtray, thereby "flocking" the rough pottery to protect furniture surfaces from scratching. The colorful ashtrays, mounted against the black insert for contrast, are visible through a transparent polyester film window that extends over most of the top of the box. A printed design of red and black hearts, spades, diamonds and clubs ties in with the product's appeal to card players. Carton, Standard Packaging's Bradley & Gilbert Div., Louisville, Ky.

OLD

NEW

3

3 To aid the shopper in selecting the proper size of bandage, Johnson & Johnson has redesigned the metal container for its "Band-Aid" plastic strips in extra-large size. Contrasted with the old, note the larger stylized arrow pointing to the illustration of the new contour-shaped plastic strip with the legend, "Extra Large," in bold lettering, followed by the wording, "Actual Size." Dimensions, formerly printed under the lettering, were meaningless to the average buyer, it was reasoned, so this information now appears on the individual envelopes inside the container. The new package measures 4 in. wide, $3\frac{1}{2}$ in. high and $1\frac{1}{2}$ in. deep. Design, Peter Schladermundt Associates, New York.

4

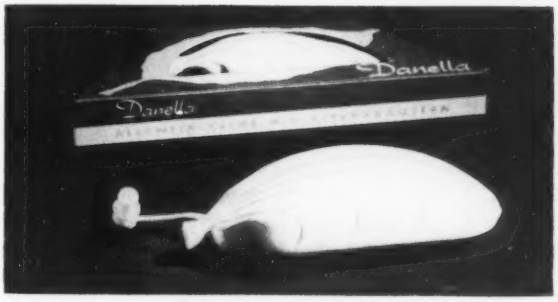
4 A new siftproof corrugated box equipped with pouring spout is now in use by United Co-Operatives, Inc., for packaging its "Unico" line of Snail & Slug Pellets and Lawn Granule insecticides. Rigidity and compactness are provided as a convenience for carrying under one arm if the product is being spread by hand. For use with mechanical spreaders, the built-in pour spout allows measuring out quantities of the product with greater accuracy and reclosing the package. Constructed of 200-lb. burst strength, B-flute board, with outer liner of bleached white sulphate, the container is filled from the side and corners are sealed for siftproofness by knife cutting the flaps short of the scores. Flaps are glue

sealed and finally are stitched. Box, Continental Can's Corrugated Container Div., New York.

5 Jerks Socks, Inc.'s open-end sleeve package provides an interesting solution to the problem of how to "lock" three socks together so that none will slide out on counter or in displays. The new container for Jerks Socks/Wovenright "Pair 'n Spare" —three identical socks sold as a unit—has both ends scored, with serrated flaps. Both flaps fold inward to grip each sock securely at both top and bottom. This double-lock devise, with firmly gripping "teeth," holds the socks in position, yet permits the customer to feel their texture. The one-piece sleeves are cut from 0.016 solid bleached sulphate coated stock, printed in black and gold. Container, C. W. Zumbiel Co., Cincinnati.

5

6 From Switzerland comes this polyethylene container blow molded in an unusual shape and equipped with a captive closure for Danella all-purpose cosmetic cream. The container, which is filled from the top, comes in two sizes; the smaller one, about 3 in. in length, is handy for purse use. It fits easily into the hand and is convenient to open and close. The outer carton, of trapezoid shape and printed in red and green, is die-cut to reveal the plastic container. Container, Supermatic, Uster, Switzerland. Design, Haering & Co., Goldach, Switzerland.

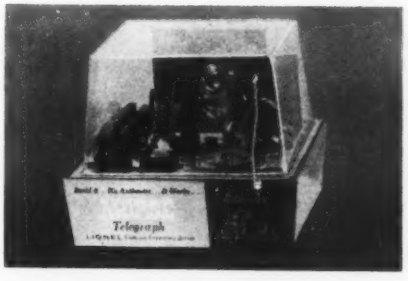


6

7 Rea Magnet Wire Co., an Alcoa subsidiary, now uses a package made of two mating units molded of expandable bead polystyrene to protect its delicate and costly spools of ultra-fine magnet wire from shipping hazards. Sixteen recesses in both the base and lid receive and hold standard fine-wire spools. The container, which replaces former wood or paperboard boxes filled with cushioning material, is sealed with tape and requires no banding or external container. Since adopting the new package, replacement of damaged wire has been minimized, the company says. An added advantage: the container can be used as a tray for in-plant transfer and as a dust-free storage unit. Container molded by Aztecs Plastics Co., Kenton, O., using Koppers "Dylite" expandable bead polystyrene.

7

8 Another entry into the field of educational science kits (see "GE Enters the Hobby Market," MODERN PACKAGING, April, 1961, p. 164) is Lionel Corp., with its Famous Inventor Series and Science Engineering Sets, in which packaging and graphics dramatize the authenticity and high scientific accuracy of the products. All packages are designed as an integral working part as well as a "showcase" for the toy. Typical of the new line is this authentic replica of the original Morse telegraph, in which the components are fitted into die-cut opening of an inner tray, visible through a transparent polystyrene cover which is injection molded by Lionel. Design, Van Dyck Associates, Westport, Conn.



8

SUCCESS STORY NO. 4 OF A SERIES

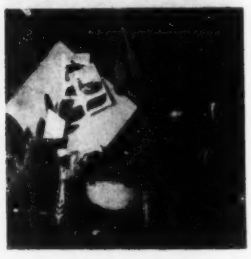
GOOD SEASONS

Handsome cruet *is free in current deal offer with purchase of one envelope of Good Seasons Onion Salad Dressing Mix. Envelope is glued to bottle; recipe folder is placed inside the bottle.*

Behind this outstanding recent success is a significant point: Today's housewife is happier with a convenience product that leaves something for her to add, to mix, to do. In space-saving foil envelopes, General Foods provides the special ingredients for a variety of exotic salad dressings—and with an attractive marked cruet shows the way to foolproof mixing. Sound packaging and effective promotion have pushed this new idea to success

THIS MONTH'S COVER

MODERN PACKAGING



In a classic photographic composition, Artist Rudy Muller suggests the gourmet touch obtainable from a simple foil-laminated envelope of Good Seasons salad-dressing mix—basis of the product's success.

The success of General Foods' line of Good Seasons dry salad-dressing mixes is based upon an astute understanding of housewifely psychology that ought to be more widely noted during the current all-out sweep to packaged convenience.

Certainly convenience is a strong point with Good Seasons. The flavoring ingredients for any one of eight gourmet dressings are contained in dry form in a foil-laminated envelope. Contents of an envelope need only be emptied into a Good Seasons cruet (provided by GF as part of the original package deal) and water, oil and vinegar added to marked levels. Shake and pour. There isn't a chance to go wrong—yet the housewife (who may add her own seasoning touches if she likes) has the feeling that she has concocted the dressing herself. And any psychologist will tell you that this is a feeling very

SALAD DRESSINGS

Full-color-printed *foil envelopes for today's eight salad-dressing flavors feature mouth-watering photographic illustrations of different salads. They are merchandised in spring-fed dispenser that takes up little space and is easy to display near cash registers and other high-traffic locations in retail outlets.*

strongly sought for, at least subconsciously, in this day when many homemakers are developing feelings of guilt or frustration in their concentration on "prepared convenience foods."

This same important bit of psychology has been recognized by producers of cake mixes, who now direct the housewife to add fresh milk or fresh eggs to the mix—when they might just as readily put all ingredients in dry form in the package.

The idea behind Good Seasons did not originate with General Foods. But GF quickly recognized the potential, took it over and applied the packaging, marketing and advertising know-how that in seven short years has built one of the outstanding packaging *Success Stories* of recent times. Today Good Seasons is virtually unrivalled in its field (although competitors have sprung up); it is giving a strong run to long-established, famous-brand, pre-mixed liquid salad dressings and is known in every nook and corner of the country.

Among the key factors in this success:

- Promotion of the marked mixing cruet along with the product. (Most marketing authorities agree that without this the product would have had little or no appeal.)
- Strong appeal to dealers in economical use of store space. (Few would dispute GF's claim that this is one of the most profitable products per square foot of any dry-grocery line.)
- Strong appeal to the housewife not only in the personal-preparation touch, but in making available in a very minimum of cupboard space an assortment of unusual dressings to afford variety to meals.
- Heavy backing by national color advertising.

This is the chronology of success: During the late '40s, Robert

The man who started it, *Robert Kreis, was supervisory chef for Hollywood's Brown Derby restaurants. He is now GF's consultant on several product-development projects.*

Kreis, at that time supervisory chef for Hollywood's Brown Derby restaurants, began receiving so many requests for his salad dressings that he formed his own company, 4 Seasons, Inc., to package dry salad-dressing mixes. He offered them as a kit—four envelopes containing four different varieties, with a mixing bottle in a set-up box. The package—with a sophisticated cover design—was sold mostly in gift shops and specialty food departments.

Here was a product, General Foods realized, which if taken out of the novelty-gift category and packaged for long shelf life might have outstanding mass-market potential.

In 1954, General Foods acquired 4 Seasons, Inc., and assigned the product to what is now the company's Perkins-S.O.S. Div., in Chicago, which manufactures another envelope-packaged line, Kool-Aid.

When new dressing mixes were added to the original four, the name was changed from "4 Seasons" to "Good Seasons." The line now includes eight different flavors of salad dressings: Garlic, Cheese Garlic, Classic, Exotic Herbs, Bleu Cheese, Italian, Old Fashioned French and Onion.

Among the first steps after acquisition was a thorough technical study of the packaging materials. The original envelopes in 1949 were little more than protective paper. A pouch material was needed that would preserve flavor, essential oils and fats, and that would provide a satisfactory water-vapor barrier. An efficient seal also had to be developed. Another requirement was a printing surface suitable for glamorous full-color food illustrations.

After careful research in GF's packaging laboratory and the trial of several pouch structures, the barrier material eventually adopted combines (from the outside in) reverse-printed cellophane, polyethylene, paper, foil and a vinyl coating for heat sealing. The effect that has been achieved is a glossy white exterior with a quality feel.

A private-mold tapered square bottle with applied-color labeling and private-mold polyethylene snap-on cap was selected for the cruet.

Two varieties of the salad-dressing mix, the mixing bottle and a salad recipe book were introduced by General Foods as a kit in a folding carton with die-cut window in the shape of the bottle. Individual envelopes of the varieties of salad-dressing mixes were also sold separately.

Backed by an advertising campaign of full-color pages in leading women's service magazines, sales zoomed, then steadied—the healthy sign of repeat business that every manufacturer watches for.

Promotional efforts were stepped up and have been continued relentlessly to increase uses by improving and adding new flavors—featured in colorful, mouth-watering ads—and by developing new recipes for the mixes in dips and other dishes.

A leading package-design firm, which had redesigned Good Seasons packages successfully in 1953, was commissioned last year to change the four-sided cruet bottle to a slim, more easily handled, three-sided bottle, decorated with the Good Seasons leaf insignia in gold and with the measure marks unobtrusively molded in the glass to provide further accent on quality for the dinner table.

And just recently the package graphics have been improved again, with new color photography to strengthen the equity built into the packages.

With success firmly established, the carton-kit idea—so important during the introductory years—has been abandoned as such. The company is currently offering the cruet and a packed-in recipe folder free as a deal with the purchase of one envelope of a flavor recently introduced—Good Seasons Onion Salad Dressing mix—at regular price.

The strategy now is to encourage homemakers to keep additional cruets on hand so that several different flavors will be ready for pouring as needed.

An effective part of the merchandising currently is a special spring-fed display rack, which takes up little space, for dispensing the envelopes.

Not a single element of up-to-date merchandising strategy has been overlooked in the development of this unusual packaging *Success Story*.

Merchandising kit *that originally put Good Seasons across contained private-mold mixing bottle, mixes and recipe book. It was the facility for easy, measured mixing that caught the shopper's eye.*

SUPPLIES AND SERVICES: Foil-laminated pouches supplied presently by Dow's Dobeckmun Div., 3307 Monroe Ave., Cleveland 13. Pouch-filling machines by Riegel Paper's Bartelt Engineering Co., Rockford, Ill. Glass cruet and polyethylene snap cap by Owens-Illinois, Toledo 1, O. Design program by Lippincott & Margulies, 130 Park Ave., New York 22.

The big show in Chicago

Idea-packed exhibits massed on single floor of spacious new McCormick Place attract 32,064 visitors to AMA's 30th Packaging Show. Audience of 751 attends concurrent three-day conference

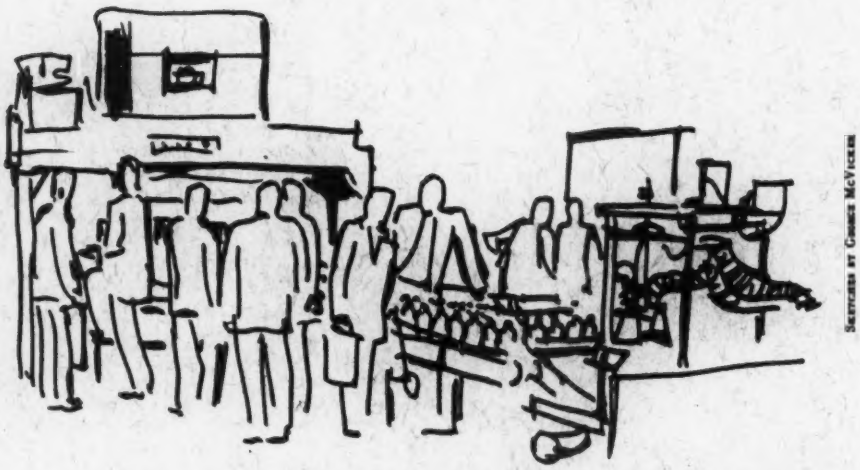
Cold statistics never tell a complete story, but they do indicate that American Management Assn.'s 30th National Packaging Exposition, held April 10-13 in Chicago's magnificent new McCormick Place, ranks with the best of the series. Despite the effect of recent company mergers and the fact that a substantial number of major equipment suppliers held back for the PMMI Machinery Show in November, the AMA event attracted 32,064 visitors (31,500 paid) to 372 exhibitor booths. Biggest ever in booth area, the 1961 show came respectably close to the exhibitor and attendance records set in New York in 1958—a year of only one show with national packaging interest.

Statistics also attest to the wealth of new developments in equipment, materials and services on display this year. The show management reports that exhibitors transacted more first-day business, from a record opening-day crowd of 12,193, than ever before.

Again this year, plastics—in flexible, rigid and foam form—dominated by sheer weight of numbers. Because of the imminence of the PMMI Show, machinery developments were less numerous than last year, but still much in evidence. Whatever his interest, however, a visitor to the 1961 Packaging Show was rewarded with a rich harvest of packaging ideas, including many brand-new developments. Some of the latter, destined to make packaging news later this year, were not out in the open. But they were there for anyone who took the trouble to do a little incisive probing.

Despite—and indeed because of—the impact of thermoplastic films, the really big news at the 1961 show was made by that wary old competitor, cellophane.

The show buzzed with the announcement of six ultrathin cellophane films (Du Pont) made from a specially modified cellulose. They are reported to be just as tough as conventional cellophane and to provide from 5 to



Sketches by Gordon McVicker

19% more yield per pound. Specifically tailored for the wrapping of cigars, cigarettes and bakery goods, these "bonus" cellophanes yield from 22,000 to 25,000 sq. in. per pound at the same price as previous cellophanes (62 to 79 cents per pound), thereby establishing a new low figure of 2.8 to 3.1 cents per 1,000 sq. in. for this packaging material, putting it back into hot competition with thermoplastic film for general overwrapping.

Coincident with the Du Pont bombshell were announcements by the other U.S. producers (Avisco, Olin Mathieson) of new lines of high-yield, low-cost cellophanes which are specifically designed for overwrapping applications at high machine speeds.

Thermoplastic films

Cellophane aside, the onrushing battle for markets in the flexible-packaging arena was a spectacular feature of the show. New and improved oriented polypropylene films (AviSun, Enjay, Viaking, Kordite) signified the growing importance of this relatively recent entry in the list of commercial plastics. A new high-density polyethylene film (Koppers) is an example of the extra packager values available in today's thermoplastics. Its best feature: ability to take a crimp seal.

A trend to shrink-film packaging was obvious this year. Demonstrations were given on machines (Mehl, Trescott) in the booths of several film suppliers (U.S.I., Reynolds, Plax).

Notable among the shrink-wrap machinery introduced in Chicago was one (FMC) which applies a complete wrap at speeds up to 70 per minute. Illustrating how the use of shrink films is being facilitated by machinery development, a compact new heat tunnel (Clamco) designed primarily for retail-store use was on display. And a major aluminum-container supplier (Ekco-Alcoa) was showing a foil pan with a shrinkable polyethylene cover (Cryovac) that is reported to effect 40% savings in materials by covering only the product and the rim of the pan.

In other new films and combinations, the two present producers of polyester film were joined by a newcomer (Eastman), demonstrating the advantages of its tough and heat-resistant material by popping corn in polyester pouches under sunlamps. In films for skin packaging, there was a polyethylene (Dobeckmun), treated by an undisclosed process, which is said to bond more firmly to paperboard and thus provide a strong package capable of holding objects of great weight.

Blister packaging continued to make news, particularly in the area of economy. One supplier (Nixon-Baldwin) featured an extruded unplasticized polyvinyl chloride sheet with high gloss and clarity. Designed for the broad range of conventional blister-packaging applications, it is reported to be lower in cost than many competitive materials.

An unusual and potentially significant application in break-away film packaging (in which dry and liquid ingredients are packed in two or more adjoining compartments for mixture at the point of use by massaging the liquid through the separating seal) drew considerable attention. This package (Continental Can, William Steven Co.) already is in commercial use as in "instant ice pack," created by mixing water from one compartment with a powdered chemical in the other. The film is polyethylene-coated polyester. Suggested uses for the package include cocktails and soft drinks, pancakes, hot or cold foods, dressings and dental cold packs.

Still another development in flexible films was the introduction of a water-soluble polyethylene oxide (Viaking) which is said to have a solubility range of 35 to 175 deg. F. Good sealing properties, printability and long shelf life are cited as its characteristics.

Rigid plastics and foams

Even more noticeable than last year was the impact of blow-molded, high-density polyethylene bottles. They could be seen everywhere, in myriad shapes and sizes, for an almost limitless variety of liquid products. The field of industrial shipping containers for corrosive liquids appears to be headed for a big swing to polyethylene, judging from new designs in blown and formed containers seen at the show. Among these is a rectangular, one-piece, blow-molded polyethylene con-

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This special report, begun only hours after the doors swung shut on the 30th National Packaging Exposition, sums up what eight MODERN PACKAGING editors found most significant and newsworthy at the show. Four days of intensive coverage of both show and conference are capsuled in this fast-reading, eight-page analysis.

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tainer with 10-mil walls, designed for use with a corrugated shipper (Delaware Barrel & Drum). It is available in 5- and 15-gal. sizes.

Blown containers also were seen in sizes up to 55 gal., utilizing a variety of steel, wooden, corrugated and solid-fibre external protective cases that permit thinner, more economical plastic structures.

From these large-capacity containers, developments in rigid polyethylene ranged down to a tiny pocket dispenser for tablets (Celluplastics), formed from two telescoping tubes of plastic. It is squeezed to dispense one pill at a time.

Plastics other than polyethylene showed great strides in the field of rigid containers. On display were aerosols molded from acetal resin (Du Pont) in one- and two-piece styles, together with a new machine (VCA) for spin welding the two-piece unit. In the one-piece package, part of the actuating valve is molded into the body, reportedly pricing this aerosol 25% below a comparable coated-glass pressure container. Another exhibitor (Celanese) also introduced an acetal plastic with similar application potential.

Other significant new rigid-plastic containers included: a formed high-density-polyethylene cup container for foods, with a reclosable lug cap of the same material (Best Plastic Container); an all-plastic milk container, vacuum formed from rubber-modified high-impact polystyrene (Mojonnier); a one-piece, injection-molded polypropylene box with a thin integral-hinge area that reportedly can be flexed hundreds of thousands of times without failure (Enjay); a double-wall polypropylene jar for wax- or cream-based products which combines light weight, break resistance and ultra-low WVTR (Imco), and a thermoformed tray container (Du Pont) which is regarded as having a vast potential in the frozen-food field.

Foamed plastics scored heavily. One new development was foamed polystyrene sheet laminated on one or both sides with 5- to 10-mil transparent polystyrene (Koppers). Thermoformed containers produced from this material can be used with fancy produce, confections, picnic foods and gift items. The foam member gives light weight for shipping economy; the regular polystyrene sheet adds strength and barrier properties.

Molded-foam containers at the show included a talc jar with a foamed-polystyrene body, decorative acetate sleeve and polyethylene sifter top (Koppers). This example indicates the potential importance of foam in partnership with conventional materials.

Metal and glass

The struggle for markets in the metal-container field was joined temporarily in Chicago. Key weapon for steel men was ultra-light plate (American Can), which they regard as most economical for oil and citrus-juice containers. This champion was faced by batallions of aluminum cans in three-piece and drawn constructions.

But the major threat to steel in both oil and citrus applications may be a third type of container: a can with a body formed of laminated paperboard and foil, with ends of solid steel or aluminum. One such container (Alcoa) has been in test use for some time. It is formed by a convolute winding process and has aluminum ends and an integral tear strip. A newer can, unveiled at the show (Anaconda, R. C. Can), utilizes a spiral winding technique that overlaps the foil layers to prevent wicking. It has been tested for both citrus and oil, and was evaluated by many canning experts, during corridor conversations, as the lowest-cost and most efficient container yet devised for these applications.

A significant new aluminum aerosol can (Bradley-Sun) that employs a free-piston principle to separate product from propellant attracted much attention. Already in commercial use as a container for a cream-type hair dressing,[1] it opens up new possibilities for many viscous food and non-food products.

Foil — alone and in combination with other materials — made big news. Announcement by a major supplier (Alcoa) that it is re-entering the converting business undoubtedly will sharpen foil competition, to the ultimate benefit of packagers and consumers. Already in prospect is a "soft can" — a foil-laminated pouch or bag which can be used for a variety of liquid or dry products. The container is reported to be particularly suited to packaging freeze-dried foods, which require a hermetically sealed package with long effective shelf life.

In glass, the trend toward lightweighting was expressed in several booths. Also on display was a half-gallon milk bottle with blown-in indentations for easy gripping and pouring (Thatcher). Still another trend in the glass-container industry — the development of safety caps for pharmaceutical bottles — was pointed up at the show. New items included a two-piece all-plastic cap with molded-in springs (Union Carbide Plastics, Brockway) that must be pressed down and turned to remove it from the bottle — hand actions that cannot easily be performed by young children.

Paperboard

Some of the most subtle and important advances in packaging to be seen at the 1961 show were in paper and paperboard packaging, especially folding cartons.

A new extrusion-coated entry was a polyethylene-coated cup for food products (Dixie Cup) which also has an external scuffproof plastic coating. The one-pint cup is reported to weigh 25% less than comparable wax-coated containers and also is said to provide a higher barrier to water vapor.

Also at the show was a vinyl solvent-type coating (Sun Chemical) that is said to afford good scuff resistance, high gloss and gluability.

New constructions were noted in paperboard cartons,

[1]See "The First Free-Piston Aerosol," Modern Packaging, Feb. 1961, p. 88.

some incorporating plastics. For frozen-food packers, there was an intriguing new carton with an attached inner liner of polyester film (Minnesota Mining, Kaplan Paper Box). The board-and-film unit is claimed to facilitate high-speed filling; liner of the container is removable for boil-in-bag cooking.

An extension of this idea in a larger size (Waldorf Paper Products) incorporates a lamination of polyester film and thin kraft paper which is fabricated into box form, then slipped into a paperboard carrier for rigidity. The container is reported to hold virtually any liquid and to provide weight savings of nearly 90% compared with glass or metal packaging.

Paper and board also were represented by such developments as: a pre-printed bleached-kraft linerboard for corrugated (St. Regis Paper), said to offer economical, fine-quality multicolor printing; a material-saving multipacking band, originally devised for flashlight batteries, which the supplier (Diamond National) has extended to other items or containers by engineering small product-holding gussets into two of the carrier's corners and a flexible corrugated board (Owens-Illinois) which is sold to packagers in an unbroken bale for in-plant forming of boxes or wraps.

A circuit of the exhibits also turned up vigorous interest in such container forms as plastic tubes and tetrahedral packs. Ubiquitous polypropylene appeared in a tube application (Thatcher, Hercules Powder).

Tetrahedron-shaped containers, running the gamut of heat-sealable films, foil and laminations, appear to be on the verge of accelerated growth. New developments in package function, provided automatically on-machine, were presented by two suppliers. Both machines are equipped to offer the merchandising extra of drinking-straw dispensing of beverages. In one unit (Bemis), the straw (a polyethylene tube) is secured inside the pyramid-shaped package, just below its tear-off top corner. When the corner is removed, the flexible straw pops out and into position for drinking. The other machine (Tetra-Pak) punches a circular hole in the outer web of material. This opening is sealed on the inside with a strip of 1-mil polyethylene; a piece of colored pressure-sensitive tape covers the opening from the outside to mark its location. In use, the tape is peeled off and an ordinary drinking straw is forced through the thin layer of polyethylene.

Machinery developments

Although many major machinery suppliers were absent, mechanical developments at the show were important and drew much attention. Big crowds gathered around a new continuous-motion horizontal pouch packer (Bartelt). Running smoothly at 300 pouches per minute, it raises the rate for this type of packaging by 400%. Two new devices hold the key to this high speed: traveling-beam heat sealers and a duck-bill filling mechanism. The heat sealers for both vertical and horizontal seams, composed of separate heating elements on an orbital chain, follow the pouches and seal 10 at a stroke with up to 0.5 sec. of dwell. The filling mechanism travels in an orbital path around the rear of the machine — where the "bills" are filled from an auger feeder — to the front — where they are cammed down and unloaded.

Other new machines claimed a share of the pouch-packaging spotlight. One twin-head unit (Stokes & Smith) can run different-size packages made from many materials at different speeds — all at the same time. The trick: separate drives that activate form-fill-seal components through simple crank mechanisms. Speeds up to 150 pouches per minute are claimed. A second dual-hand pouch packer (Triangle) is designed for use with polyethylene and is reported to be capable of 54-per-minute speeds per head.

Still a third vertical pouch packer (Bartelt) uses a unique vacuum-sleeve device to push the film through the filling and sealing section, thus removing all strain from the film during the heat-sealing operation — an important consideration with stretchy thermoplastic film. The vacuum device is said to enable production speeds up to 100 per minute, virtually double that of previous units. Also seen was a pouching machine with dies that open like a clam (Sundstrand) which is reported to cut change-over time in half.[2]

For the growing field of plastic-tray packages for foods, one exhibitor (Packaging Industries) showed a 30-per-minute sealer that for the first time uses impulse sealing to attach a film-web cover to a thermoformed-plastic base. Operating at 150 per minute is a new machine (Silver Creek Precision, Lily-Tulip) for portion-packed foods in single-serving trays. This unit also pleats the film for easy opening.

Carton packagers also may be in for new progress from the standpoint of simplified, low-cost machinery. One new unit featured at the show (Gardner Div.) wraps an open-end carton around multiple units (such as jars, cans and individual cartons) and locks them in place with a triangular tab of carton stock. Boasting extreme simplicity and flexibility, it is priced at less than $2,000. A modified ice-cream-carton accumulator/bundler (Hayssen) is reported to offer faster change-over and improved sanitary handling.

Cartoners looking speculatively at the new hot-melt adhesives saw a miniature extruder (Potdevin, National Starch) that can apply either a continuous stream or intermittent patterns of resin glues. A hot-melt applicator (Stein, Hall) that drew much attention is unusual in that temperature is controlled by heated circulating air, to eliminate local overheating or char. For cold adhesives, still another applicator (Marathon) provides an enclosed system that is said to cut adhesive consumption by as much as 30%.

Other significant machinery developments included:

- A vibratory machine for unscrambling polyethylene bottles (Emhart) that aligns and sorts a variety of container sizes and shapes at 165 per minute.
- A four-lane, enclosed filling system for milk containers that can be adapted to small, medium or large operations (American Can). Each lane in the straight-line system operates at 20-per-minute speed.
- A three-color, semi-automatic flatbed printer that labels flat or oval containers in one pass (International Eastern). Printing speed is reportedly 35 per minute.
- An automatic labeler-imprinter-conveyor (Avery) to handle pressure-sensitive labels at 120 a minute.
- A unit that permits heat-transfer printing of gallon and half-gallon polyethylene bottles (Dennison).

[2]See "How GM Uses Blister Packs," MODERN PACKAGING, April, 1961, p. 191.

• An automatic ticketer/labeler (Amsco) to apply pressure-sensitive labels or tickets to any package.
• An imprinter that adds a one-line imprint to a partially printed web of thermoplastic stock at the rate of 60 per minute (New Jersey Machine). Type reportedly can be replaced in a matter of seconds.

General observations

Strictly from the viewpoint of visitor comfort and convenience, McCormick Place's debut as the setting for the Packaging Show was an unqualified success. All 372 booths were located on one well-lighted, spacious and almost unpillared floor whose 162,000 sq. ft. of exhibit area is larger by far than that of the Chicago International Amphitheatre, Atlantic City Auditorium or New York Coliseum. Even the traditionally huge second-day throngs were accommodated comfortably.

One minor fault was the poor numerical identification of aisles and booths. An innovation this year was an International Visitors Lounge and interpreter service where more than 200 overseas packaging personnel, representing 30 nations, registered for the show.

The AMA Packaging Show will return to McCormick Place in 1963 (April 22-25). Next year's show, running April 9-12, will be held at the New York Coliseum.

Again this year, the show was managed by Clapp & Poliak, New York. John C. Clay, sales-promotion manager of National Starch & Chemical Corp., was chairman of the Exhibitors' Advisory Committee.

A total of 751 packaging men registered for the concurrent three-day AMA National Packaging Conference, which was also held at McCormick Place, one level below the exhibit area. Following are abstracts of all conference papers and panels:

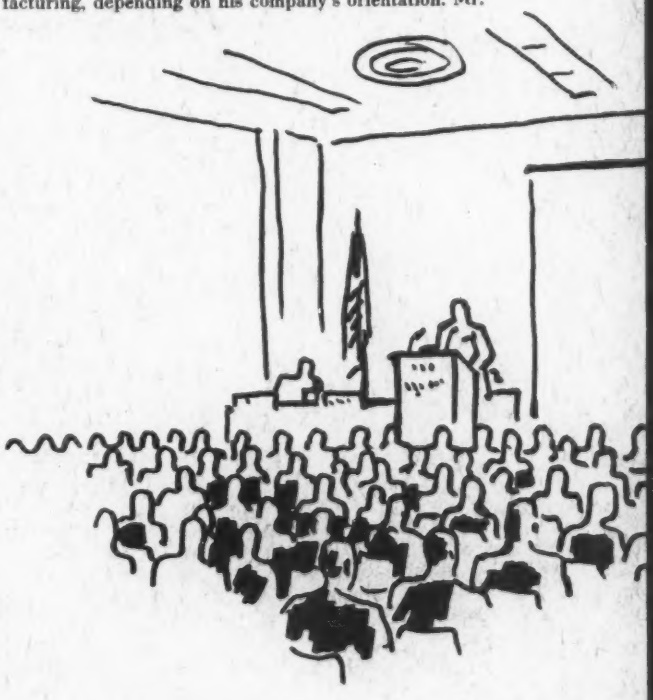
The power of packaging

Chairman, HENRY SCHNIEWIND, *vice president, Spring Mills, Inc., and AMA vice president in charge of packaging. Co-chairman,* JOHN R. MCCARTY, *vice president —advertising and merchandising, The Frito Co.*

The Power of Packaging — WALTER N. PLAUT, *president, Lehn & Fink Products Corp.* Packaging must be a top-management responsibility—and it can be managed as efficiently as any other business function. It is much too powerful a marketing weapon to be left to chance, said Mr. Plaut. It must be integrated with over-all company objectives. Lehn & Fink recently installed a $250,000 packaging line. No one man or department can be responsible for decisions of this magnitude, he said. Marketing and production must have a voice, of course, but only through close cooperation with the financial department can the true profit picture involved in such a decision be evaluated. Lehn & Fink plots its packaging programs in terms of short- and long-range objectives. To expedite this it has recently revamped its allocation of packaging responsibilities. The newly named director of marketing has been assigned the duties of new-product development and package design. To the new manager of marketing development goes responsibility for coordinating creative packaging activities with long-range planning. The third new position, that of packaging coordinator, to be established shortly, will improve liaison between marketing and production departments. Coordination is the essential key.

Purchasing's Expanding Role in Package Dollar Management — FRANK X. TULLY, *general purchasing agent, Ralston Purina Co.* All Ralston Purina packaging purchases are made from the company's St. Louis headquarters. Once the ordering is done, plants are on their own. They pay their own packaging bills, schedule their own deliveries and, incidentally, try to get suppliers to do most of their package warehousing for them. The same rules apply for Canadian plants and those in the U.S. Purchasing agents today are expanding their sphere of interest beyond the limits of simply buying materials, Mr. Tully said. They are acutely aware of the need to keep abreast of innovations. For example, Ralston hot cereal will undoubtedly be packaged in edible film as soon as this promising material becomes available. Purchasing agents are also much concerned with company functions not directly related to purchasing. Mr. Tully commented especially on the relationship of advertising to packaging. Packaging and advertising share the same goals: attract attention, arouse interest, create desire, inspire confidence and induce action.

The Care and Feeding of a New Packaging Idea — CLIFFORD H. GOLDSMITH, *vice president for subsidiary relations, Philip Morris, Inc.* The three most important factors in development of any packaging idea must be (1) how the final decision is made, (2) who makes it and (3) what the decision is based on. More and more over the last decade the packaging committee has taken over the first two areas and package research the third. Despite its widespread use, said Mr. Goldsmith, this system is not perfect. A better solution seems to be the strong, well-informed packaging coordinator who gathers and weighs all pertinent information, then makes a recommendation to top management. He should report directly to either marketing or manufacturing, depending on his company's orientation. Mr.



Goldsmith personally believes the coordinator should report to marketing. Package research can never replace creativity, but used properly, can save money and time, and bolster brand standings.

Industrial goods packaging

Chairman, F. W. LANGER, *package coordinator, Socony Mobil Oil Co., Inc. Co-chairman*, R. G. EDWARDS, *vice president — marketing and public relations, American Hardware Corp.*

New Developments in Shipping and Distribution — WARREN L. SERENBETZ, *assistant vice president, operations, Railway Express Agency, Inc.* Mr. Serenbetz advocates a system of containers in a limited number of modular sizes and conforming to integrated handling requirements. Coordinated container transportation is practical, he said, because it reduces transportation costs, inventories, in-transit time, packaging requirements, transit damage and marketing needs.

New Concepts for Package Cost Improvements — SEIBERT L. ROWLEY, JR., *packaging specialist, Distribution Transformer Dept., General Electric Co.* A good program of cost improvements in packaging is not only advantageous, Mr. Rowley declared, but it is one of the best tools for good customer relations.

The following steps should be considered in developing an effective program of packaging engineering: (1) Motivation, stemming from: (a) new product; (b) customer request or sales request; (c) engineering request; (d) varied conditions; (e) as part of a regular program. (2) Determine protection required: (a) fragility; (b) type of shipment. (3) Handling and special requirements. (4) Quantity. (5) Design container by means of: (a) use value-analysis approach (brainstorming); (b) work with vendors; (c) work with other departments; (d) package council; (e) laboratory. (6) Laboratory tests. (7) Field test. (8) Feed back on regular shipments.

Distributors, Jobbers, Dealers and *Your* Packages — JOHN C. MYERS, JR., *vice president, F. E. Myers & Bro. Co.* When you put together a packaging project or program, consider the person on the other end of the line. He has to read it, understand it, handle it, stock it, open it, display it and, above all, sell it. Our salesmen are charged with the responsibility of analyzing our packaging in their territory and to make recommendations to the sales division so that we can do a better job for our customers. Our advertising manager makes it a point to pick up ideas on packaging when he talks with dealer and wholesaler groups in our sales-training program. This year we will talk to nearly 800 of our distributors and dealers. All of this has channeled into our packaging committee and we have compiled a list of what our customers look for in packaging. These are elements we must give strong consideration to in all package planning.

What is Practical Package Sell for Industrial Goods? — *A panel discussion by* ARTHUR D. BALDWIN, *sales promotion manager, Clevite Service, Cleveland Graphite Bronze Div., Clevite Corp.*, L. J. CLANCY, *supervisor, Service Sales Dept., Burroughs Corp.*, G. A. RAUCH, *manager, merchandising and sales promotion, Cutler-Hammer, Inc.*

We merchandise sleeve bearings for use in auto, truck, bus and tractor engines, said Mr. Baldwin. Our packaging objectives are fourfold: First we want it to maintain the image of quality and service we strive for in our advertising. We do this by designing our box to be clean, uncluttered and simple. We certainly have our brand identity on it, but do not fill every last inch. Secondly, the package should protect the product. Our third objective is to enhance the appearance of the jobber's stock. Lastly, and most important, packaging should contribute to the stocking and handling ease by the jobber.

In the highly competitive market we have today, Mr. Clancy declared, the most important aspect of "package sell" is —"does it make you competitive." If it doesn't, then all the package sell in the world will not get you the business. Our manufacturing facility recommends the most practical type of package to use. Our distribution people recommend the type of package most practical from the shipping point of view. Then the package is turned over to our department to develop the "package sell" ideas. This is done with the help of our advertising department. After completing our recommendations, the entire package is turned over to our appearance design engineering department, which then incorporates all suggestions into the final package.

Mr. Rauch pointed out that Cutler-Hammer is a large supplier of motor controls, switches and protective devices used as components and a broad variety of control systems in the electrical industry. In early 1958,

serious consideration was given to a new corporate mark as a means of symbolizing our true company's capabilities. After a careful study and many consultations with industrial designers, the final form of our new corporate mark evolved. Particular attention was paid to the logo as it might be applied to packaging, although its application in advertising and promotion played a prominent part in the evaluations. In total we were able to determine a selection of about 45 boxes to cover 180 catalog numbers.

Consumer goods packaging

Chairman, R. E. HEINE, *executive director of production services, Eli Lilly & Co. Co-chairman,* R. P. GARDINER, *vice president, S. C. Johnson & Son, Inc.*

New Packaging—Who Needs It?—GILBERT D.MILES, *manager of packaging, Toilet Articles Div., Colgate Palmolive Co.* We should be healthily suspicious of accepting any customer as steady, said Mr. Miles. Instead, we might better replace this idea with a model from nuclear physics and think of customers as having a brand loyalty half-life. This is the time in months in which 50% of those now using the brand will be replaced by users from other brands. If the brand loyalty half-life of your product is low enough, it is better for you to lead in all phases of product and packaging modernization than it is to pave the way toward certain obsolescence by sticking doggedly or fearfully to what you have. What is required to prevent this trend toward obsolescence is to measure, through the application of market research, your brand loyalty half-life. With these data you then can set a course of action with respect to new packaging and product innovations that can prevent the decline of a brand on which millions of dollars have been spent. Surely this can be more profitable than to face the uncertainty of replacement by your own new brand or of losses from competition.

Printing and Color Control — What the Customer Sees — C. E. THOMAS, *product marketing manager, frozen foods, Campbell Soup Co.* The compelling effect of color on sales was described by Mr. Thomas. Color prejudices markedly affect sales, he said. There are established rules in the use of color in terms of mechanics, psychology, geography, temperature and, according to some experts, even in terms of shape, music, odor and taste, but the practical fact is that the rules become pretty abstract. There is always a violation of some of the established rules to accomplish the prime objective — catching and holding the consumer's attention. Mr. Thomas said that in no other segment of marketing, except advertising, do emotions and visual judgment play such a significant part as they do in selecting package elements.

Packaging Systems Planning in Review — The World's Most Modern Bottling Plant — A. E. DOWNING, *superintendent, Finished Goods Dept., Hiram Walker & Sons, Ltd.* The three years of planning that went into the building of Hiram Walker & Sons modern plant facilities at Walkerville, Ont., were described by Mr. Downing, who outlined the value of a committee set-up for assembling essential data relating to the building project. The first step taken in the organization of a planning group was the formation of a Building Committee, he said. Reporting to the building committee were six sub-committees: (1) A Materials Handling Committee responsible for recommending facilities and equipment necessary to move glassware, labels, etc., into and from the packaging lines. (2) A Packaging Committee to recommend the number and type of packaging lines required and the specifications of equipment. (3) A Processing Committee to design systems for handling bulk product. (4) A Committee on Personnel to handle employee facilities. (5) A Safety and Security Committee. (6) A committee for the establishment of offices and communications.

Which Packages Succeed in the Shopping Center— *A panel discussion by* JULIAN T. BARKSDALE, *vice president, marketing, Stephen F. Whitman & Son, Inc.,* N. L. JONES, *Merchandise Div. coordinator, S. H. Kress & Co.,* MICHAEL KEITH, *marking director, Popular Price Div., W. A. Shaefer Pen Co.*

In 1960, Mr. Barksdale reported, there were 4,500 large shopping centers and it is estimated that by 1965 there will be approximately 8,000 in operation throughout the country. By the end of this year shopping centers will account for about $50 billion in retail sales, or about 25% of the total retail trade, excluding automobiles. Shopping centers are causing a definite change in distribution and shopping habits. And subsequently a change in all consumer packages.

From our extensive studies we formulated a list of five basic criteria for self-service packaging: suitable box dimensions; visibility of contents or, if this is not practical, an excellent reproduction of contents on the package; prominent product identification; basic family design; appealing color.

There are more than 23,000 variety stores in operation in the United States, doing a volume in excess of $4 billion annually, Mr. Jones stated. They plan to open approximately 940 new stores during 1961. There is at least one variety store in every recognized shopping center. Generally speaking, the same packages that are successful in shopping centers succeed down town.

Mr. Jones drove home 10 essentials for successful variety-store packages: instant product recognition; complete directions for use; design and colors appropriate to the product; attractiveness to interest the shopper; improved packaging for hard-to-display items; fair representation of contents; coordinated programs for product families; sturdy packages to withstand handling and shopwear; constructions to discourage pilferage; upgrading for sales and profit.

Most shopping centers, Mr. Keith declared, are dominated by a supermarket, a drug store and a variety store. What distinguishes one from the other to the consumer? Exactly nothing in 99 cases out of 100.

I believe that today's stores and many of today's shopping centers are far too big for just people—big for the people who are required to buy in them—and they are required to do the impossible for the manufacturer whose products are sold in them.

The profiles of packaging

Package Engineering and Production — *A panel discussion. Chairman:* EDWARD J. MONAHAN, *director*

of packaging research, National Biscuit Co. Co-chairman: GEORGE RYAN, *director of packaging, Abbott Laboratories. Panel members:* C. P. BOLTON, *director packaging research, Carnation Co.;* L. J. HAYHURST, *packaging research manager, National Dairy Products Co.;* M. T. HATAE, *senior research engineer, North American Aviation, Inc.;* J. P. O'HANLON, *manager of packaging, Radio Corp. of America;* CHARLES ZUSI, *packaging consultant.*

The delicate balance between over packaging and under packaging was highlighted by Mr. Bolton in an opening presentation on consumer packages and was continued by Mr. Hatae, who discussed the same problems in industrial shipping containers. Cited as a major step forward in this area was the development of design curves for foamed polystyrene, which enables more accurate planning of package construction. Now needed, according to Mr. Hatae, is a quantitative index of fragility which engineers can use to reduce even further the variables in structure. Noting that many packages compromise in protection, economy and convenience, Mr. Hayhurst called for advanced research to sharpen these three factors. Mr. O'Hanlon, reverting to the subject of shipping containers, called for national standardized test methods to correlate test figures for improved packages. A summary of new packages and materials at the show that might answer some of these problems was given by Mr. Zusi.

Package Distribution and Marketing — *A panel discussion. Chairman:* CARMON M. ELLIOTT, *manager, Packaging Design Dept., Eastman Kodak Co. Co-chairman:* G. DON DAVIDSON, *vice president and director of marketing, Jack's Cookie Corp. Panel members:* PROCTER COFFIN, *general sales manager, New England Confectionery Co.;* ROBERT W. HONER, *merchandising manager, Heublein, Inc.;* ROBERT SIDNEY DICKENS, *president, Dickens, Inc.;* D. J. LEEKER, *manager, informative packaging, Sears, Roebuck & Co.;* RALPH W. SEYMOUR, *director of design, Cooperative G.L.F. Exchange, Inc.*

Packaging convenience is an extra merchandising plus, but must also take into account the particular problems of the manufacturer and the retailer as well as the consumer, according to Mr. Leeker. Candy packaging that is brighter, more festive and easier to display was shown by Mr. Coffin, who also noted that 92% of candy sales are impulse and that any single brand has only a half second to make its bid for consumer attention on the supermarket shelf. Display stands that make it easier to choose bottled mixed drinks were shown by Mr. Honer, who also traced the steps in package redesign that have resulted in successful merchandising of these products. Mr. Dickens discussed and graphically portrayed the current trend to "copycatting" in packaging designs, which he described as the curse of the packaging industry and an extreme inconvenience to shoppers. The need for face lifting in design of industrial containers was emphasied by Mr. Seymour.

Luncheon sessions

Packaging for the Government Today ... For Industry Tomorrow — THOMAS P. WHARTON, *president, Packaging Consultants, Inc.* During the past 20 years, Mr. Wharton pointed out, the Government's packaging program has contributed significantly to improved methods and materials for protecting, moving and handling every conceivable kind of commodity. From this multi-million dollar program a stream of profitable packaging applications has been made available to industry. American packaging is about 25 years ahead of packaging in any other country. Government is primarily responsible for the state of the art of industrial packaging as we know it today. Consumer packaging has also benefited. Probably the greatest contribution of Government has been to arouse an awareness in industry of the importance of packaging as a vital part of our economy and to promote a technical approach to the science of package engineering. Mr. Wharton cited a number of examples of Government's past contributions to the industry and developments now under way.

Package Developments Abroad — ERICH IBIELSKI, *manager, Technical Dept., Allgemeine Elektricitats-Gesellschaft.* The growing trend to supermarket, vending-machine and mail-order methods of merchandising products in Europe is creating vast changes in the way such goods are packaged, declared Mr. Ibielski. But though many American packaging methods are coming into use, European packaging is not a slavish copy and is developing in a typically Continental way to meet the needs of the greater European market that is now in the process of formation. Special factors influence packaging developments in West Germany. Housewives shop every day and do not favor nonreturnable containers. Storage space is restricted in homes and apartments, and few women have cars in which to go shopping. Therefore, in consumer packaging, unitized and small containers are in vogue, though it is a constant struggle to keep designs simple and costs low. In industrial packaging, palletized and containerized shipping is rapidly sweeping all European countries, following the establishment of regionalized pallet pools that may soon merge into a common pool throughout the entire Continent.

Film shipper for produce

Vahlsing tests the novel idea of bulk bagging various perishables in thin, tough, high-density polyethylene and achieves a new low in container cost with up to 53% saving on shipping charges

Tough 50-lb. bags of thin, high-density polyethylene are now doing a major job of product protection for shipments of fresh produce at a cost lower, it is reported, than most previous containers.

In rail movements of up to 2,000 miles from the Rio Grande Valley in Texas to Northeastern markets, a 3-mil shipping bag made from a modified high-density copolymer of polyethylene appears to withstand rough railroad handling and direct icing —according to its pioneer user—yet better preserves the crisp appearance of fresh produce items.

Already employed for carrots, cabbages, lettuce and potatoes, the new film shipper may have far-reaching consequences for other fresh vegetables and fruits as well as for many non-foods, since it utilizes film 50 to 70% thinner than that customarily employed in polyethylene shipping bags—with no sacrifice in strength of the container.

First to use the new container is the Fred H. Vahlsing Co., Edinburgh, Tex., grower and shipper that also pioneered 1- to 5-lb. plastic bags for prepackaging carrots at the grower level.

The new bag, easy to handle and compact in storage, costs about 15 cents—25 to 63% less, according to Vahlsing, than mesh bags, corrugated wet-strength cartons and wirebound crates used previously as produce shippers. Though slightly more expensive than double- or triple-wall paper bags, also previously used, plastic bags are impervious to moisture and can be top iced for rail-car shipment (unlike the paper bags, which must be bunker cooled). This saves 53% on shipping charges for the Texas-to-New York run, says Vahlsing, one of the country's biggest produce shippers.

The simple bags are formed from flat tubing and measure 21 by 37 in. in the flat. They are loaded either by hand or by machine, depending on the size of the local operation. Carrots and potatoes are pre-packaged in 1-lb. polyethylene bags before loading; cabbages and lettuce are loaded in bulk. Closing methods include heat sealing, sewing or wire ties, again depending on the size of the operation.

The bags are purchased with a multitude of ¼-in. holes punched in both sides to enable vacuum cooling for such a product as cabbage and to allow free passage of respiration gasses, heat and excess water from hydrocooled vegetables.

Big plastic bags *protect freshness of produce shipped to New York by this Texas packer. Fred H. Vahlsing, Sr. Carrots are packed in 1-lb. polyethylene shippers, but most other produce is bulk shipped.*

Regular shipments of produce in the new containers are now being made to Bohack, Wynn Dixie, First National, Grand Union and American Stores. The bagging technique may soon be extended to such other produce as corn, celery and spinach.

SUPPLIES AND SERVICES: High-density polyethylene shipping bags by Texas Plastics Co., Elsa, Tex., using W. R. Grace "Grex" and Phillips "Marlex" resins.

Full visibility *as well as cushioned protection of model planes are features of Comet's new folding carton. Note 1-in. air space in all four walls, die cut to secure plane and accessories in place. One carton size accommodates four different types of models.*

Folding-box flexibility

Intricate die cutting of three-piece window carton and applied label permit Comet to use one package for four model planes. Product visibility and improved protection are achieved with 15% saving

Comet Model Hobbycraft, Inc., Chicago toy manufacturer, is flying high with an ingenious three-piece, cushion-wall folding carton which provides several packaging advantages for Comet's line of plastic gasoline-powered scale-model planes. A material saving of more than 15% is the principal dividend. In addition, the folding carton:

1. Allows Comet to use the same package for four different plane models, although the models differ in size and shape. Only a simple pressure-sensitive label change is required.

2. Has reduced damage to these delicate though expensive toys, which sell for $7.95 to $14.95.

3. Permits full product visibility through a polystyrene-film window in the lid.

4. Encourages greater point-of-purchase display of the Comet line by toy retailers.

5. Requires only 1/5 the storage space formerly needed to handle four types of set-up boxes.

This packaging ingenuity suggests broad application possibilities in the toy field, where product-damage ratio is high, as well as for other products requiring economical protection and visible display (see "Folding-Box Winners For '61," MODERN PACKAGING, April, 1961, p. 173).

Comet's former set-up boxes were colorful and attractive, but had opaque lids. Moreover, each model required a different box base, lid and inner

platform. Because the demand for any one plane model is unpredictable—influenced strongly by news events—Comet had to stock large quantities of each package component for each plane, badly crowding its packaging facilities. The new folding cartons are stored flat and in smaller numbers.

The carton achieves its flexibility with cleverly spotted die cutting of the base, which is pre-glued in four places by the supplier. Formed up with flaps tucked in (by the packager), the base becomes a double-wall container with more than an inch of air space between inner and outer walls for cushioning.

Each plane is positioned diagonally in its carton. A series of die-cut slots on either side of the two wing corners permits the carton to be used for either straight or swept-back wing design. Size differences are taken care of by the air space between the carton walls, since wing tips of the larger planes simply protrude deeper into the air space. Both nose and tail of the planes are similarly immobilized in the other corners. Special die cuts accommodate a control handle, spool of line, starting kit and battery.

The carton top, also supplied flat, squares up to telescope over the base portion. An insert of clear polystyrene covers almost the entire upper surface and improves the toy's impulse sales appeal by showing customers that the model plane is fully assembled and ready to fly.

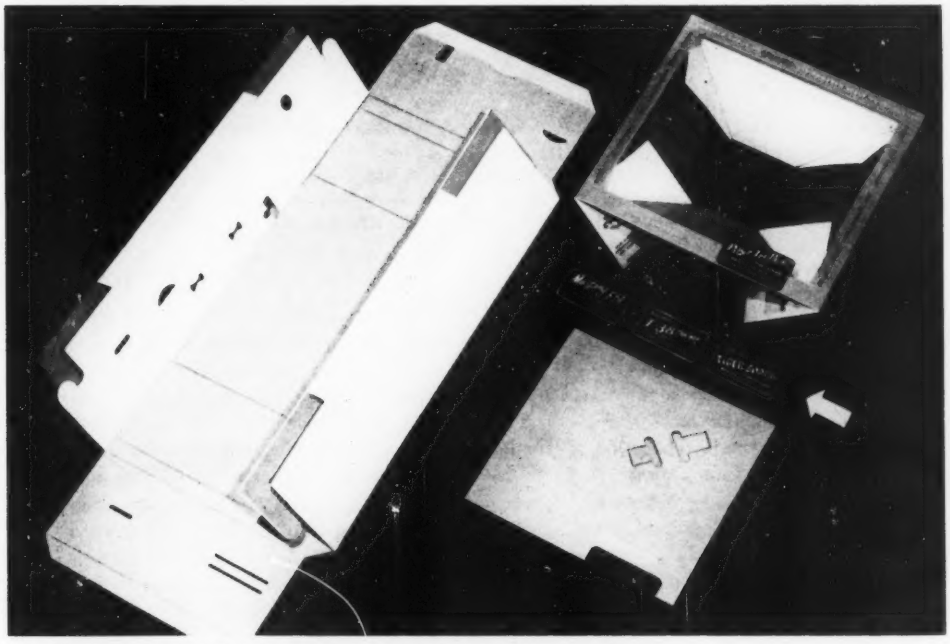
One top serves all four models. Since the product itself is now clearly visible, no specific product illustration is required. Instead, the sides of the carton top carry full-color-lithographed illustrations of all four planes, one on each side, while the plane itself identifies the model. Although all carton tops are printed by the supplier with the name of one model, Comet uses pressure-sensitive labels over the printed name to change the product identification.

The new cartons are packed six to a corrugated shipping container with no additional cushioning; damage ratio is reportedly low.

Comet believes that this folding carton will accommodate, without structural changes, an almost limitless number of new plane models as they are produced and marketed by the company.

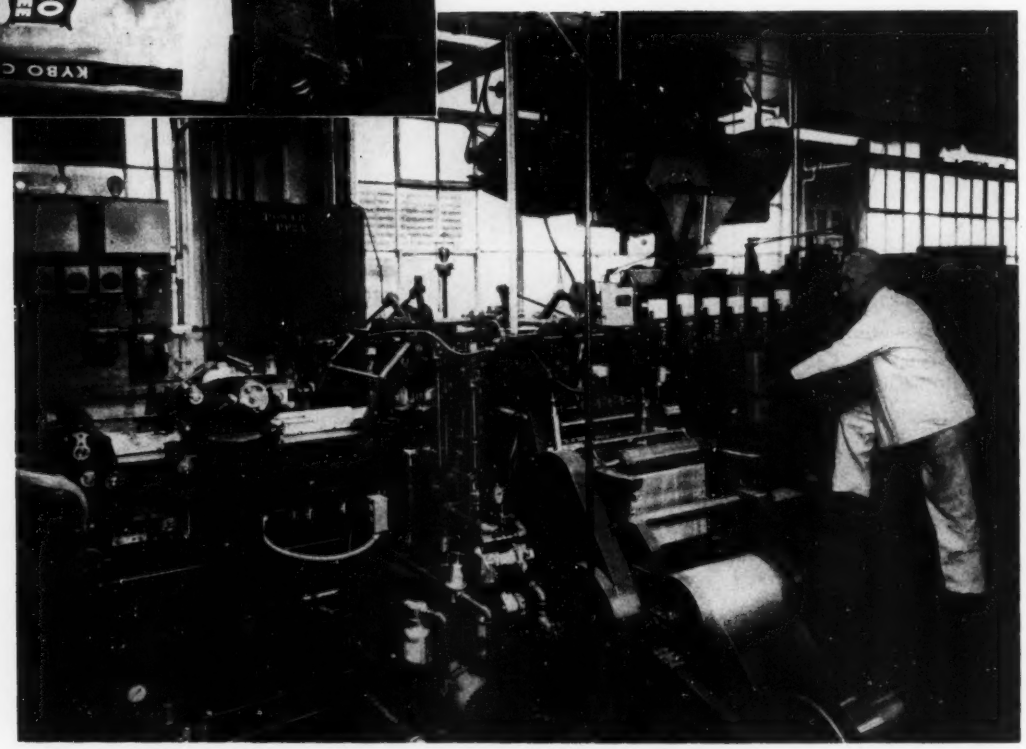
Comet, which is a moderate-size company with 300 employees, is now in process of planning similar cartons for its line of toy racing cars.

SUPPLIES AND SERVICES: Carton by St. Regis' Crowell Carton Co. Div., Marshall, Mich., using Dow's "Trycite" polystyrene film.



Interchangeable labels *(arrow) provide only variation in package components that house all four plane models. To adapt the box to different models, the appropriate pressure-sensitive label is affixed over one label printed on all cartons by the supplier. Inner platform (lower right) is salvage from board die cut from the carton top.*

Barrier bag



Rotary and in-line units *in combination form, fill and seal film-lined bags (upper photo) for two First National pre-ground coffees. Line photo shows roll-fed film (right foreground) and sheet-fed paper (left center) that meet at horizontal turret (center). In upper photo, heat-sealed film liner is pulled from outer paper bag to indicate construction.*

In-plant forming of square-bottom paper bags with integral film liners has now been made possible through development of new equipment that integrates in a new way the elements of package construction and product filling, weighing and sealing. Because of the type of package it produces, the machine should be of interest to packagers of many different types of free-flowing products, including foods and chemicals, which require low-cost, sift-proof, moisture-barrier packages.

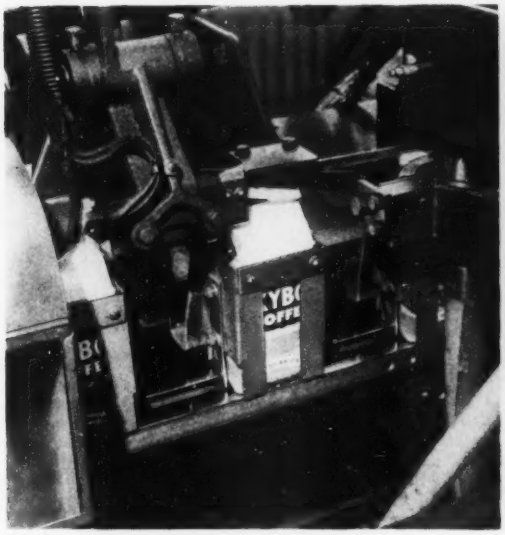
First beneficiaries of the new packaging technique are the hurried customers of First National Stores, who can now save about two minutes of shopping time through this supermarket's adoption of the new barrier bag for pre-ground coffee. More importantly for the packager, this bag increases product protection and also eliminates in-store grinders, thereby saving valuable floor space in the nearly 450 retail stores of this giant New England chain.

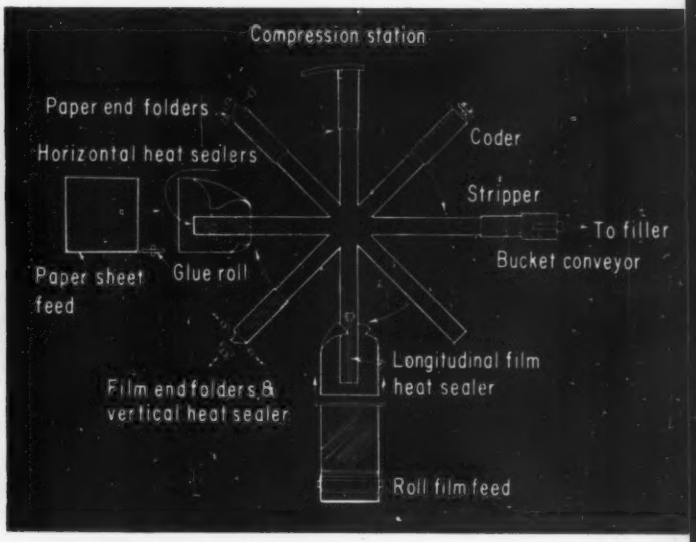
Gone are the familiar whole beans that previously were ground on the spot in a two-minute do-it-yourself operation and gone also is the conventional tin-tie duplex paper bag. In their place are ready-to-use "Kybo" and "Richmond" brands of coffees, now pre-ground at First National's central packaging and distribution warehouse at Somerville, Mass., and packaged in hermetically heat-sealed double-wall 1-lb. bags that preserve the fresh taste and aroma of the ground coffee fully as well as the previous container preserved the taste and aroma of the whole beans. Packaging experts in this field look for a shelf life of four weeks for these products.

Behind this improved product protection and time-saving convenience lies a story of package and

formed and filled

At First National plant, significant new combination equipment makes film liner from roll stock, forms paper bag around it, fills a pound of coffee, then heat seals liner and glue seals the bag





Horizontal turret *is used both to form and heat seal the film liner and to apply and glue outer paper bag. Seven stations on this intermittent-motion unit operate clockwise from the film feed (bottom).*

Heat sealing *of inner film liner through outer paper is performed by reciprocating bars (center) as filled bags travel to right in chain-mounted buckets for top folding and gluing.*

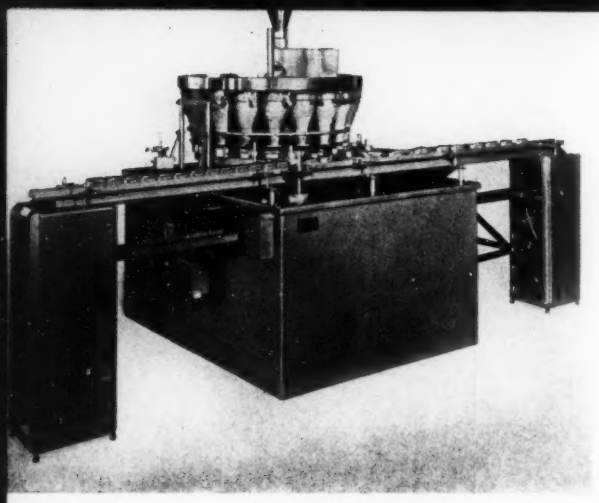
machine development, starting with the design of a high-barrier film-and-paper bag and ending with construction of the special bag-forming, filling and sealing units to mechanize the packaging operation at a speed of 60 one-pound bags per minute. This successful combination, working from roll film and pre-cut paper blanks, has cut container costs 39%, reduced labor and almost doubled the speed of packaging for a 260% increase in output per manhour over the original operation with pre-made bags.

While glassine- and cellophane-lined bags have been used before for whole coffee beans, the pre-ground coffee requires a bag with even stronger barrier properties. This is accomplished at First National with a separate inner liner of 120-gauge rubber hydrochloride (Pliofilm). The outer shell is of 50-lb. bleached kraft printed in three colors.

When the decision to eliminate in-store grinding was made, the company at first bought bags already made up, but the important cost savings have been obtained with the development of the integrated machines that form, fill, weigh and seal the package right on the packaging line. The bag is constructed on a rotary unit, which has seven working stations and operates with an intermittent motion. Filling and sealing are performed by a straight-line unit that is connected and timed with the bag former.

The roll-stock film is cut to length and wrapped around one of eight forming mandrels, which project horizontally from a turret, like the spokes of a wheel. At the initial [*Continued on page 201*]

SUPPLIES AND SERVICES: Pliofilm by Goodyear Tire & Rubber, Akron 16, O. Bag forming, filling and sealing machines by Pneumatic Scale, Quincy 71, Mass.

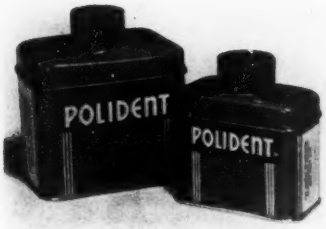


Automation speeds line 140%

Block Drug Co., Jersey City, reports that installation of an 18-pocket rotary filler on its packaging line for Polident powdered denture cleanser has resulted in:

- Complete automation that pays off in greater efficiency at lower labor cost.
- A 140% increase in filling speeds.
- Upgraded quality control that satisfies the requirements of sanitary handling and humidity protection demanded for this personal-hygiene product.

The new rotary filling machine, which has been integrated into the packager's existing conveyorized line, handles both 3-oz. and 7-oz. metal Polident containers. Filling speed for the 3-oz. can, says the company, is 144 per minute— almost 2½ times the output of a former auger filler. Change-over of container size is said to take about 90 minutes.



According to Block, the filler offers extremely simple operation. The powdered product is fed down to a circular feeder tray for delivery to the filling spouts, where a conveyor raises each can into contact with a filling head. The spout is completely shielded to prevent the entry of foreign elements and to guard the product against humidity. *Rotary filling machine by Frazier & Son, Clifton, N. J.*

COST CUTTERS

Standardization for immediate and long-range economies

NEW

OLD

Charles Pfizer & Co., New York, has completed a glass-container standardization program that not only affords immediate economy, but also is calculated to pay long-term dividends in more efficient packaging-line operations and less costly inventory and storage procedures. This carefully conceived program involves containers for the ethical pharmaceuticals of the Pfizer Laboratories and Roerig divisions.

Pfizer has scrapped a former line of 33 bottles of varying sizes and shapes, replacing it with 13 family-related cylindrical containers which can accommodate either roll-on or screw closures. Ranging in capacity from 5 to 200 cc., the new bottles can accept more than 300 different dosage forms. In addition, these glass containers represent only five different body diameters and four seal sizes, in comparison with 29 diameters and 11 seal sizes for the former line. There are obvious implications of economy in terms of reduced down time for change-over adjustments on filling and sealing machinery. *Bottles by T. C. Wheaton Co., Millville, N. J. (Wheaton also assisted in container design); Hazel-Atlas Glass Div., Continental Can, Wheeling, W. Va., and Owens-Illinois Glass Co., Toledo 1.*

All-board dispenser carton has built-in cutting edge

The continuing technological developments that are building new and higher standards of quality into many old familiar packaging materials also offer opportunities for improved container performance at lower cost. A noteworthy example is the new bleached-board carton for household aluminum foil developed by the package-engineering staff of Tidy House Corp., New York.

The new carton differs from its predecessor in that it has no serrated metal cutting edge. Instead, serrations are die cut in the board itself during carton manufacture. The strength and durability of the cartonboard enable the integral serrated edge to function perfectly for the life of the product, says the packager. The carton contains a standard 25-ft. length of rolled foil.

Tidy House reports that elmination of the traditional metal cutting edge not only has produced a significant reduction in packaging-material cost, but also has resulted in shipping economies by making the carton substantially lighter in weight. The board cutting edge also is safer for consumers to use because, the packager points out, it cannot cut or lacerate the fingers as a metal edge sometimes does. *Carton by Riegel Paper, 260 Madison Ave., New York 16.*

Safe shipper at 36% less

A 36% saving in material costs and a 50% reduction in time required for package set-up are reported by the Duro Co., Dayton, since its adoption of a sturdy corrugated shipping carton with two simple cushioning inserts as the new container for a motorized water-pumping and filtering system. It replaces a wood-cleated corrugated shipper formerly deemed necessary to protect the multi-component product from the hazards of shipment and other handling.

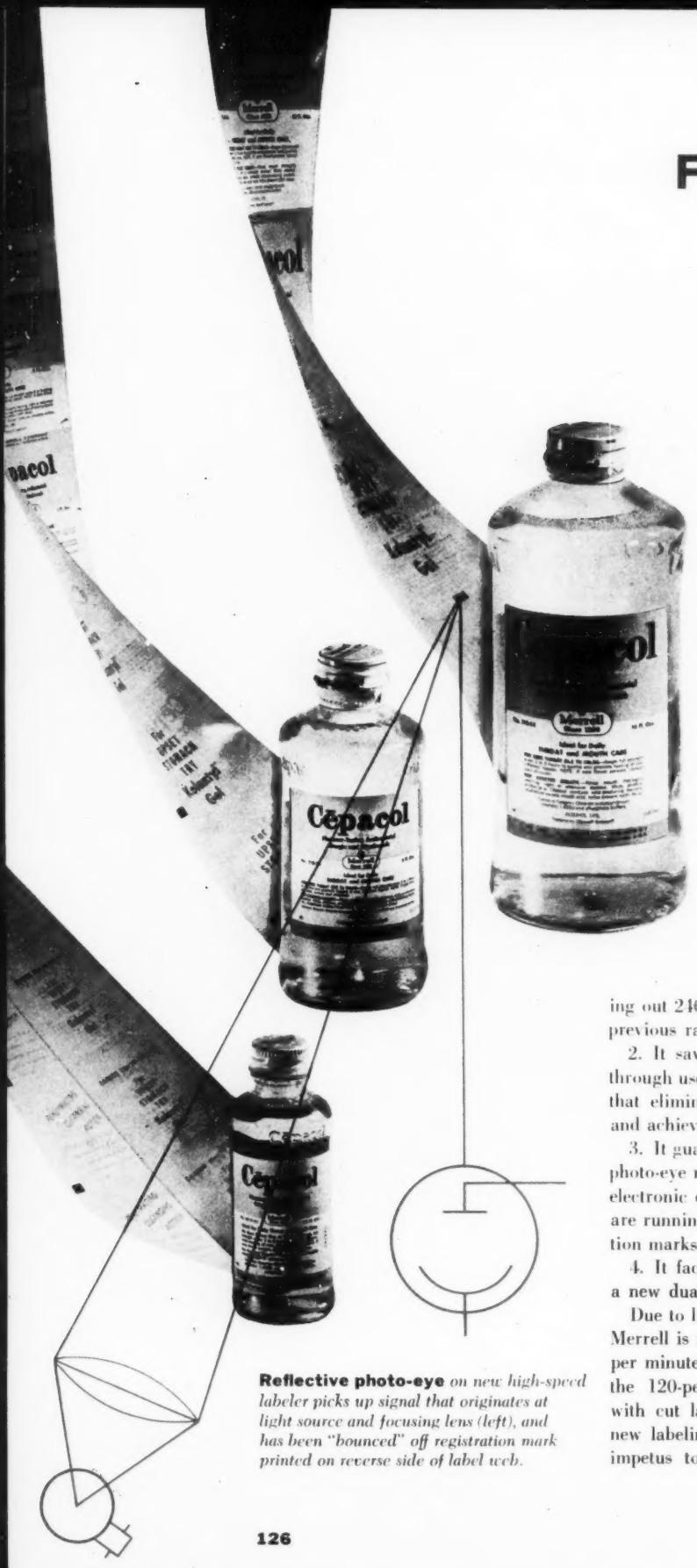
According to the packager, the die-cut corrugated inserts —which are positioned above and below the mechanical water system—provide ample product protection even under rough handling conditions. Duro also points out that elimination of the nailed wooden cleats greatly speeds up the packaging operation and cuts down on over-all shipping weight. From the customer-company standpoint, the absence of sheathing makes the carton-opening job faster and neater.

In line with a developing trend among industrial packagers, Duro's new shipping container features a brighter surface design that incorporates improved product identification. *Corrugated shipping carton by Olin Mathieson Chemical Corp., Packaging Div., 460 Park Ave., New York 22.*

NEW

OLD

PRECISION



Reflective photo-eye *on new high-speed labeler picks up signal that originates at light source and focusing lens (left), and has been "bounced" off registration mark printed on reverse side of label web.*

Both marketing and production men may now achieve their sometimes different packaging objectives with a new high-speed thermoplastic labeler for glass bottles that uses roll-stock labels instead of the conventional cut variety.

Moreover, as used by the William S. Merrell Co., Div. Richardson-Merrell, Inc., Cincinnati, for three sizes of Cepacol mouthwash, the new machine departs from conventional roll-stock labeling practice by utilizing hidden registration marks—printed on the reverse side of the labels—instead of the obvious notched or punched marks. In fact, since punched marks cannot be added with gravure printing in one pass, the new marks are necessary to facilitate this low-cost printing technique.

From a production standpoint, registration and cut-off with the printed marks are said to be fully as accurate as with the punched labels. Also, in addition to the elimination of glue pots, the machine offers these improvements:

1. It is faster, capable of turning out 240 bottles per minute, which is double the previous rate with cut thermoplastic labels.

2. It saves money—50 cents per 1,000 labels through use of continuous gravure-printed roll stock that eliminates costly label cutting and bundling, and achieves precise registration at high speeds.

3. It guards against mislabeling, since a reflective photo-eye registration device employs ultra-sensitive electronic circuitry to verify that the correct labels are running, shutting down the machine if registration marks for another product or size appear.

4. It facilitates clean code marking by means of a new dual-head flat-bed letterpress imprinter.

Due to limitations in other equipment in the line, Merrell is now running the unit at only 200 bottles per minute. But even this speed is 67% faster than the 120-per-minute operation previously attained with cut labels. With its multiple advantages, the new labeling technique is expected to give further impetus to the trend toward roll-type labels for

ROLL LABELING

New 240-per-minute, web-fed machine prevents misbranding of Cepacol bottles by electronically reading hidden registration marks to identify proper labels and control thermoplastic application

many high-speed and critical labeling operations, particularly to avoid the danger of applying the wrong labels mixed into a stack of cut labels.

Special label feed

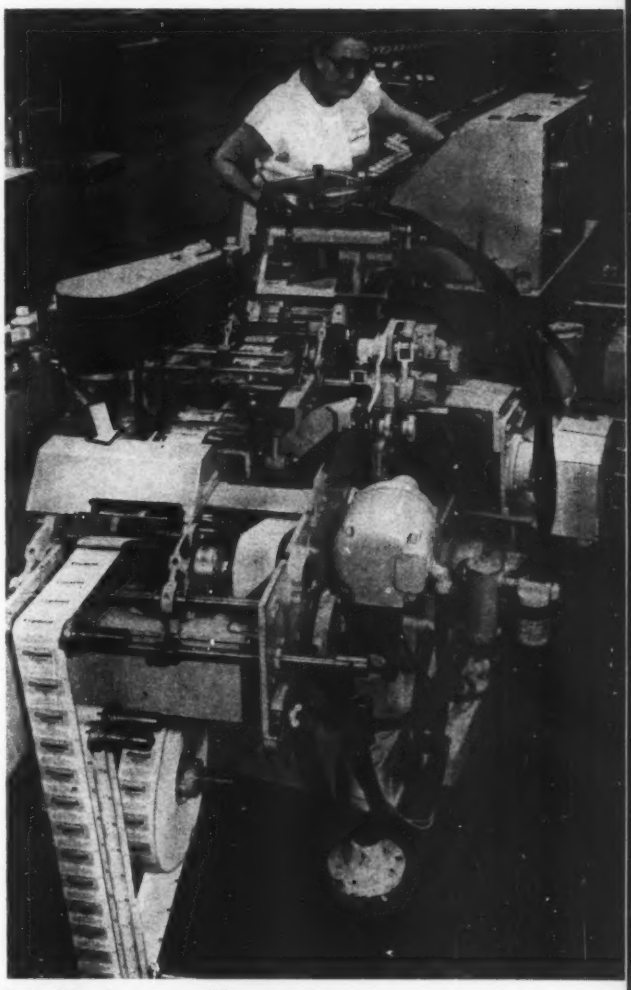
The achievement of high accuracy in imprinting and cut-off registration on a machine that operates with intermittent motion was a neat trick in engineering design and required a special label feed.

The new machine's web unwind is a pulley mounted on a swinging arm. This arm, through an eccentric, also operates a mechanical brake which eases off as the pull on the label web becomes stronger and sets when web tension slackens.

Next in line are two draw rolls that feed labels on demand and which are activated by a "free loop" consisting of a pair of photo-eyes. The code mark is added by the dual-headed imprinter that swivels between two inking pads and the label web.

The main photo-eye registration mechanism, located under the moving web, then picks up control of the labels. Labels for each size Cepacol bottle are printed with an individual pattern of registration marks. With each change of bottle and label size, the light beam is angled and adjusted to hit the appropriate marks. Through fast-acting electronic circuitry, this unit alternately starts and stops the main feed rolls that push labels to the cut-off knife.

Action of these spring-loaded rolls is controlled by a solenoid, which lifts the top roll when energized by the photo-eye, thus momentarily stopping the label feed. The actual drive for the rolls is through a cam-operated rack and pinion. As the labels pass through the feed rolls, they are raised 45 deg. to position them for cutting and transfer. The cut-off knife is motivated by a cam lever.



Label feed *is governed by a pair of electric eyes in a "free loop" (arrow) that actuates a pair of draw rolls (directly in front of the loop housing) to pull labels from the reel and feed the intermittent-motion machine.*

Label application

Application of the severed labels to the product bottles involves three mechanisms: a vacuum transfer arm, a rotary vacuum drum and the main label-applicating cylinder, which has been heated.

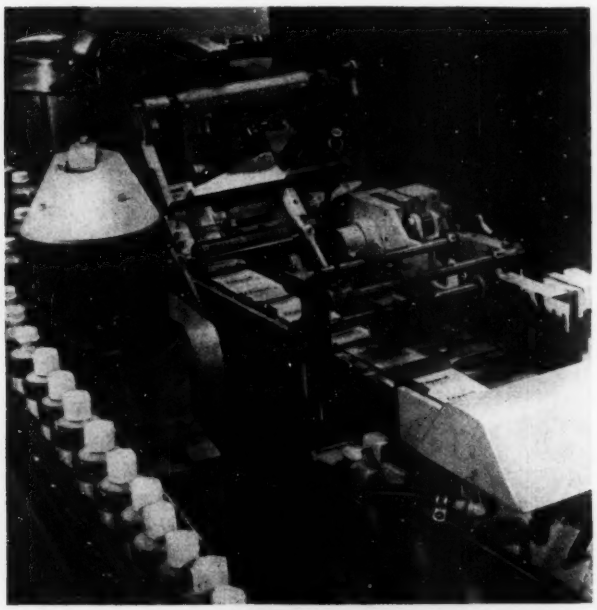
To keep the cut label under complete control and

registration, the transfer arm makes contact with the label before it is sheared from the web and holds it by means of vacuum ports. It then swings the label in a vertical position to the rotary drum, which holds the label by vacuum with the printed side out. When the label is transferred to the applicator cylinder, it is in a reversed position with the printed side in and the thermoplastic coating (softened by the heated drum), facing out toward the row of passing bottles.

Timed and brought into contact with the labels by means of a screw feed, each bottle picks up a label from the cylinder by the leading edge. A sponge-rubber compression belt squeezes and rotates the bottle against a back-up plate to press the label into proper place around the bottle.

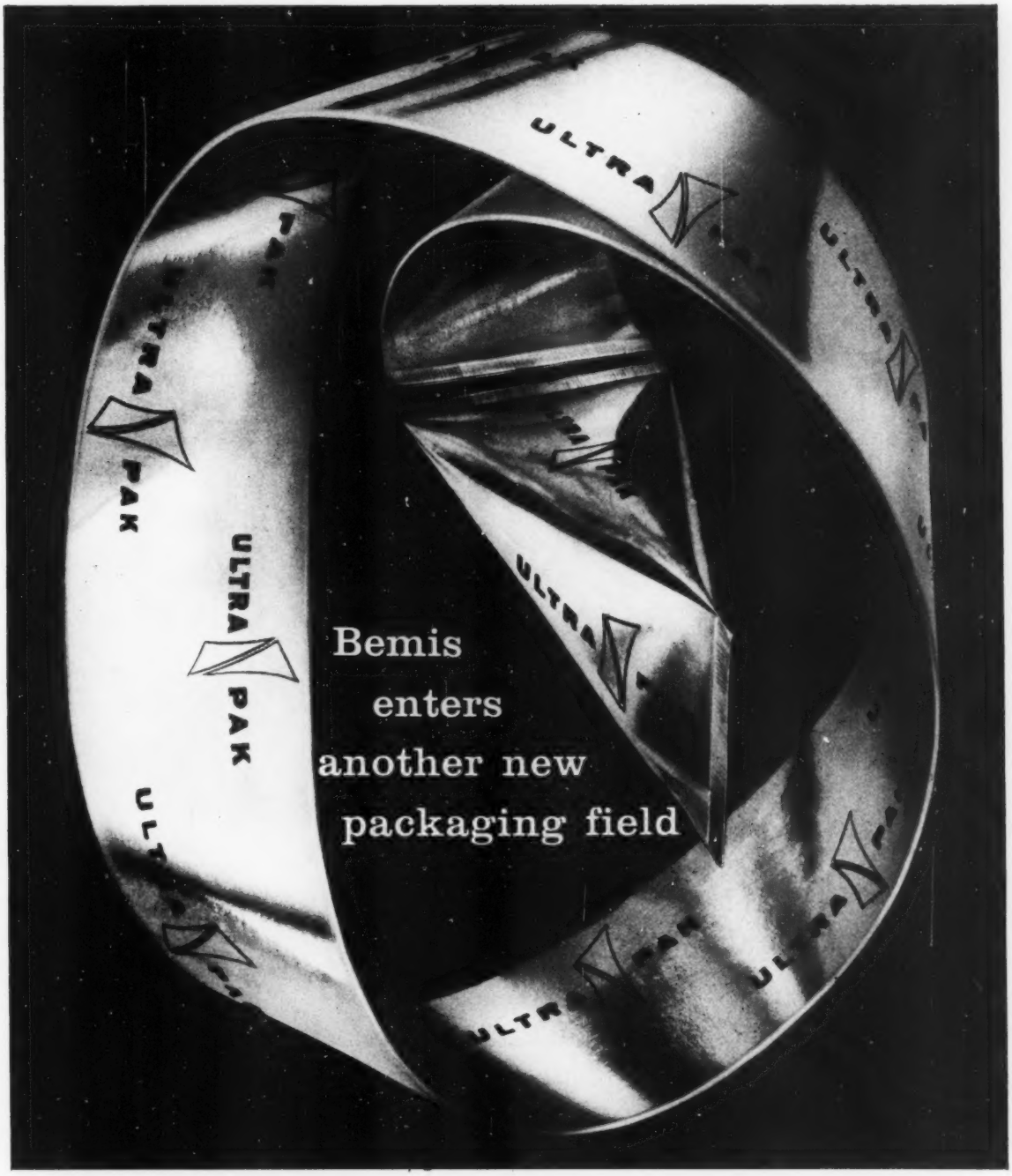
Progress in the field of roll labeling is underscored by the reflective registration system in this unit. It is the latest development in a series of machines that includes another roll-type thermoplastic labeler with the more conventional notched registration and a variety of roll-type machines for application of glue labels. Assurance that each bottle is accurately labeled—the key advantage of the roll-stock label—has led to its increasing use, particularly for pharmaceuticals. Such developments in equipment should do much to advance this labeling technique in many product-packaging fields.

SUPPLIES AND SERVICES: "Label-Dri Champion" roll-feed labeler by New Jersey Machine, Hoboken, N.J. Roll labels by Diamond National's U.S. Printing & Lithograph Div., 575 Madison Ave., New York 22.



Imprinting and cutting *operations come next in line. The printer (right) is a dual-head flat-bed unit that swings between two ink pads. Reflective photo-eye is out of sight under the web; it activates the main feed rolls (one of which can be seen in this photo, at center) that feed a pivoted cut-off knife. The labels are then transferred to bottles via a series of drums, which are visible at upper left.*

Cut-off accuracy *is seen at the point where labels are transferred from heated drum to the bottles. Note the precision with which the cut-off knife consistently hits the tiny, rectangular-shaped registration marks.*



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CHARLES A. SOUTHWICK, JR., Technical Editor ROBERT J. KELSEY, Engineering Editor

Indications for polypropylene film

An up-to-date report on packaging properties and machine performance, with some typical product performance data.

*By Edward T. Severs and Robert J. Ridgway**

Protection is one of the most important requirements of a packaging film. The contents of the package must be protected against soiling and contamination during shipment, storage and display. Moisture must be kept in the package or kept out of the package, depending upon the product. Aromas and flavors must be kept in the package and objectionable odors must be kept out. This means that one of the most important features of package protection is barrier properties.

The barrier properties of any given film are determined largely by the chemical nature of the molecules making up the film. Olefinic materials are extremely hydrophobic and, hence, resist the penetration of moisture. Also, the configuration of the molecules retards moisture diffusion. In a crystalline material, the close packing of the molecular chains increases the resistance of the film to diffusion by any permeating substances.

Properties of polypropylene

In the case of polypropylene, the already hydrophobic nature of its chemical composition is increased by its high degree of crystallinity. This crystallinity is brought about by the isotacticity of the polypropylene chains which permits close packing so that intermolecular forces can operate. Aside from the contribution of crystallinity to barrier properties, it also contributes to the stiffness of the film, which facilitates machinability. The clarity of the film, on the other hand, is dependent upon the size of the crystallites or spherulites, small crystallites giving rather high clarity and large crystallites contributing to haze in the film.

* The authors are with AviSun Corp., Marcus Hook, Pa.

Polypropylene film has a density of approximately 0.89 gm. per cc. and, as a consequence, yields the highest amount of square inches per pound of material of any packaging film.

The tensile strength of polypropylene film is also affected by the degree of crystallinity, since the cross-linking action of the crystals promotes high

Figure 1. *Stiffness of polypropylene film facilitates high-speed wrapping and folding. Cantilever of film in this end-wrap operation on an FA machine extends without drooping.*

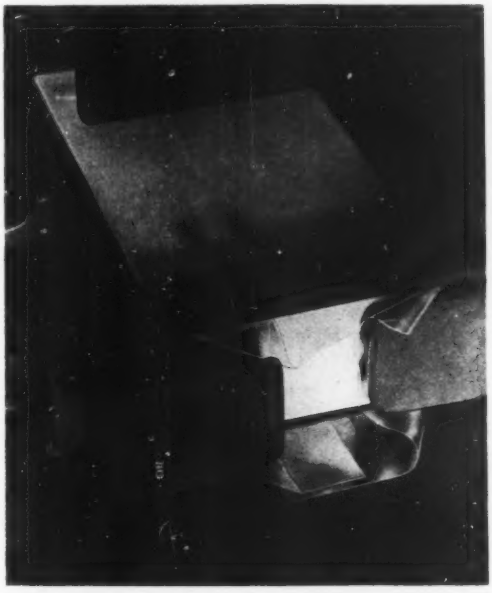

Figure 2. *Isotactic polypropylene shows a high degree of crystallinity, revealed by the rings or bands in this X-ray diffraction pattern of AviSun's polymer. Tighter-packed molecules account for greater stiffness, rigidity, moisture-barrier properties and heat and solvent resistance in the film.*

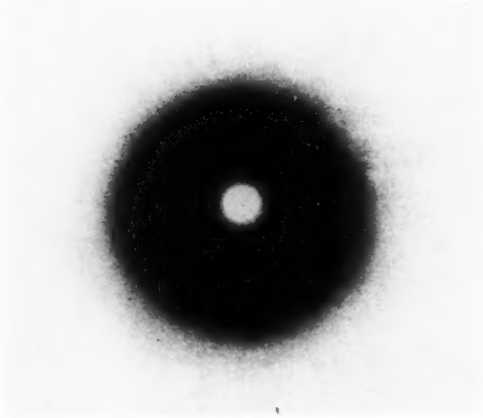

Figure 3. *Atactic polypropylene, the forerunner of the commercial isotactic product, is an amorphous mass and does not reveal well-defined rings or bands, as does the isotactic.*

strength and increases the stiffness of the film. The tensile strength of polypropylene film is around 7,000 p.s.i., while the modulus of elasticity is around 100,000 p.s.i.

Non-crystalline polymers have a wide melting range; that is, the material gradually softens to a viscous liquid. A highly crystalline material like polypropylene, although it softens somewhat below its melting point, shows an abrupt change in viscosity at the point of crystalline melting, which is around 330 deg. F.

Table I: Barrier properties

Gas	*Transmission**
Ethylene oxide	1500
Carbon dioxide	810
Oxygen	245
Nitrogen	60

Water-vapor transmission
0.7 gm./100 sq. in./day/mil at 95 deg. F. and 90% R.H.

*c.c. 100 sq.in./day/mil/atm. at 73 deg. F. and 15% R.H.

The barrier properties of polypropylene film are listed in the data in Table I.

The solubilities of polypropylene film are presented in data in Table II.

It is seen that polypropylene film is not attacked by inorganic materials below oxidizing concentrations and only swollen by aromatic, chlorinated and low-molecular-weight hydrocarbons below the melting point of the film.

Machinability

In packaging, the machinability of a film is affected by the following three factors: stiffness, slip and heat-sealing properties.

Stiffness is important in feeding operations where the film is pushed into position. If the film is too flexible, it will buckle and jam. A stiffer film will allow itself to be pushed a greater distance without this buckling action. Stiffness is also important in the forming operation, where a cantilever beam of the film extends over the edge of the package. If the film droops excessively, the film will not align with the folding slots and jamming will result. The stiffness of the film is a function of the modulus of elasticity and the thickness. In a cantilever beam, the stiffness increases as the cube of the thickness, so we can write an equation where Machinability = Modulus of Elasticity $\times$ Thickness^3.

Slip is also important in feeding operations, since the lower the coefficient of friction, the more easily the film can be pushed without buckling. However, too much slip will result in poor feeding, due to excessive slippage on the pushing surfaces.

Heat sealing depends upon the ability of the material to weld to itself under heat and some pressure to form a seal. Polypropylene has a relatively wide heat-seal range; that is, the range between a tack seal and melt-through. This is surprising when one considers the rather narrow melting point of the material, but this has been borne out on actual packaging-machine tests where the heat-seal range

has started with a tack seal as low as 280 deg. F. and has extended up to as high as 500 deg. F.

Adhesives and printing

The non-polar nature of the surface of polypropylene imparts little attraction for ink vehicles, which are essentially polar materials. Therefore, the best way to bring about adhesion of the ink vehicle is by making the polypropylene surface more polar. This is done by partially oxidizing a surface layer of the film in order to obtain adhesion of the inks. Experience has shown that polypropylene film treated for printing is also the type that is best suited for the adherence of adhesives used for combining polypropylene to itself and to other materials. In general, the same types of inks that work well with polyethylene also work well with polypropylene. In particular, the polyamide-type inks appear to be the best suited at the present time.

Package tests and results

One way to judge the potential of a film in giving protection to a specific packaged item is to look at the barrier properties. However, this can be misleading since, in the actual construction of a package, heat sealing, creasing and solvent action of various ingredients may materially change the barrier characteristics of the film. The only sure way to evaluate package performance is to make tests on the actual package ingredients wrapped with the film in question. To this end, a series of packages were made up, using many commercial items and stored at extreme conditions expected to be encountered in the actual storage of such a package.

Potato chips were tested by storage in pouches at high humidity. Taste and aroma were rated by a panel of six people not associated with the packaging laboratory. The results are given in Table III.

The best results for potato chips with regard to taste and lowest weight gain were with the polypropylene pouches constructed either from duplex totalling 2 mils, or by a single 2-mil thickness. An optimum pouch judged by interpolation between the results of the 2-mil polypropylene and the 1-mil polypropylene would be a 1½-mil polypropylene at 3.39 cents per 1,000 square inches.

Freshly ground coffee was stored at high humidity conditions, brewed into coffee and evaluated by a different panel. Best over-all results were obtained with saran-coated cellophane, with 1-mil polypropylene being second. Here again, 1½-mil polypropylene film would be considered a good contender for this particular application.

Prepared mustard and catsup were evaluated after storing at room conditions for a period of six weeks, with the results shown in Table IV.

Table II: Chemical resistance

Reagent-inorganic	*Temperature, deg. F.*	*Contact time, days*	*Remarks**
Acids			
97% sulphuric acid	73.4	30	Not attacked
2 normal sulphuric acid	73.4	30	Not attacked
Hydrochloric acid (30%)	73.4	30	Not attacked
Hydrochloric acid 2N	73.4	30	Not attacked
Nitric acid, fuming	73.4	30	Slight
Nitric acid, 40%	73.4	30	Slight
Nitric acid, 40%	150.8	30	Resistant
Bases			
Potassium hydroxide, 50%	73.4	30	Not attacked
Sodium carbonate	73.4	30	Not attacked
Sodium carbonate	150.8	30	Not attacked
Sodium hydroxide, 50%	73.4	30	Not attacked
Sodium hydroxide, 50%	150.8	30	Not attacked
Salt solutions			
Chlorox	73.4	30	Not attacked
Chlorox	150.8	30	Not attacked
Brine	73.4	30	Not attacked
Glacial acetic acid	73.4	30	Not attacked
Glacial acetic acid, 10%	73.4	30	Not attacked
Acetone	73.4	30	Not attacked
Benzene	73.4	30	Slight
Benzene	50.8	30	Attacked
Carbon tetrachloride	73.4	30	Attacked
Carbon bisulfide	73.4	30	Attacked
Chloroform	73.4	30	Slight
Ethyl acetate	73.4	30	Not attacked
Ethyl alcohol	73.4	30	Not attacked
Formaldehyde, 35%	73.4	30	Not attacked
Formic acid (anhydrous)	73.4	30	Not attacked
Gasoline	73.4	30	Not attacked
Gasoline	150.8	30	Resistant
Hexane	73.4	30	Not attacked
Igepal	73.4	30	Not attacked
Isopropyl alcohol	73.4	30	Not attacked
Linseed oil	73.4	30	Not attacked
Methyl ethyl ketone	73.4	30	Not attacked
Olive oil	73.4	30	Not attacked
Silicone oil	73.4	30	Not attacked
Toluene	73.4	30	Resistant
Turpentine	73.4	30	Resistant
Xylene	73.4	30	Resistant

*NOTE: Not attacked—No observable effect. Slight—Barely observable, but performance not affected. Resistant—Material resists attack, but time-dependent properties should be checked for each application. Attacked—Not recommended.

Judging by flavor retention, the 1-mil polypropylene was the best for mustard and catsup, followed by medium-density and low-density polyethylene.

Saltine-type soda crackers were stored at high humidity and the results are shown in Table V.

For crackers, 2-mil polypropylene was the best from the point of crispness and lowest weight gain, followed by 1-mil polypropylene and medium-density polyethylene at 1¼-mil thickness. It appears that 1-mil polypropylene film would be adequate.

Boil-in-bag applications for polypropylene appear

very attractive because of polypropylene's high melting point. Since polypropylene film will withstand steam sterilization, it follows that boiling water would have little effect on this film. Pouches were prepared in 1- and 2-mil thicknesses and green peas were placed therein. It was found necessary to remove the air from the pouch in order to prevent floating on the water, with subsequent poor cooking of the peas on the top. Evacuated bags permitted the peas to be cooked thoroughly, with no indications of seepage and adherence of the bag to the pan.

Cocoanut and rice are difficult to package because of the high oil content. In the case of polypropylene bags made from 1-mil film, storage of oil in these bags for several weeks resulted in very little or no visible oil penetration. However, there was enough penetration to cause the printed inks on the outside of the bags to release. We believe that this problem can be solved by using thicker film together with printing inks of greater oil resistance.

Processed meats are an area where the grease resistance of polypropylene film is superior. Frankfurters and bacon were wrapped and heat sealed in polypropylene film and stored at 34 deg. F. At the end of the test, the packages were opened after checking for weight loss and examined for sliming and mold. The results of these tests are shown in the data in Tables VI and VII.

From Tables VI and VII it can be seen that for this application, polypropylene film in 1-mil thickness gave outstanding performance, both with regard to weight loss and a minimum amount of deterioration, at the lowest film cost. These results would not be predicted on the basis of WVTR data, since the WVTR values for polypropylene are in the same order of magnitude as cellophane. However, it is believed that the grease attacked the cellophane coating and then permitted the moisture to be transmitted. This was borne out by the cockled and puckered appearance of the cellophane packages.

Table III: Potato chips at 90 deg. F. and 90% R.H. (57 gm. in pouches)

Film	*Construction*	*Total thickness, mils*	*Results at 15 days Taste*	*Wt. gain, gms.*	*¢/1,000 sq. in.*
Polypropylene	Single	1	5	2.4	2.25
Polypropylene	Duplex	2	1-best	1.8	4.50
Polypropylene	Single	2	2	1.8	4.50
Cello, saran	Single	1	4	2.3	4.05
Cello, lacquer	Duplex	2	3	2.6	5.90

Table IV: Mustard and catsup (Stored at room conditions)

Film	*Thickness*	*Flavor retained, 6 weeks*	*¢/1,000 sq. in.*
Polypropylene	1 mil	1 best	2.25
Polyethylene, medium density	1 mil	2	2.18
Polyethylene, low density	1 mil	3	1.67

Table V: Crackers (7 gm. at 90 deg. F. and 90% R.H.)

Film	*Thickness, mils*	*Results after four weeks Crispness*	*Wt. gain, gms.*	*¢/1,000 sq. in.*
Polypropylene	1	2	6.0	2.25
Polypropylene	2	1-best	4.9	4.50
Polyethylene, low density	1.20	3	6.8	2.00
Polyethylene, medium density	1.25	2	6.0	2.72
Cello, lacquer	1	4	7.8	2.95

Table VI: Frankfurters (½ lb. at 34 deg. F. refrigeration)

Film	*Thickness, mils*	*Results after 31 days Wt. loss, gms.*	*Sliming*	*¢/1,000 sq. in.*
Polypropylene	1	0.13	1-least	2.25
Saran, oriented	0.6	0.70	2	4.20
Cello, saran	1	6.57	3	4.05
Cello, lacquer	1	7.90	4	2.95

Table VII: Bacon (½ lb. at 34 deg. F. refrigeration)

Film	*Thickness, mils*	*Results after 31 days Wt. loss, gms.*	*Mold*	*¢/1,000 sq. in.*
Polypropylene	1	0.067	1-least	2.25
Saran, oriented	0.6	0.233	2	4.20
Cello, saran	1	1.970	3	4.05
Cello, lacquer	1	2.800	4	2.95

Conclusion

Evaluation and testing of polypropylene film are going on at an accelerating pace and even by the time this paper is published, improvements are expected to make these data obsolete. However, these data indicate that polypropylene can be machined to form packages and that these packages will give excellent performance at competitive or lower cost where moisture content and aroma content must be preserved. Polypropylene film shows particularly outstanding performance in applications involving fatty foods or similar products.

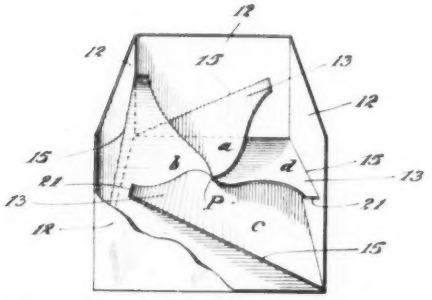

Figure 1. *Drawing from original patent, issued in 1924 and now expired, illustrates diaphragmatic bottom locking arrangement.*

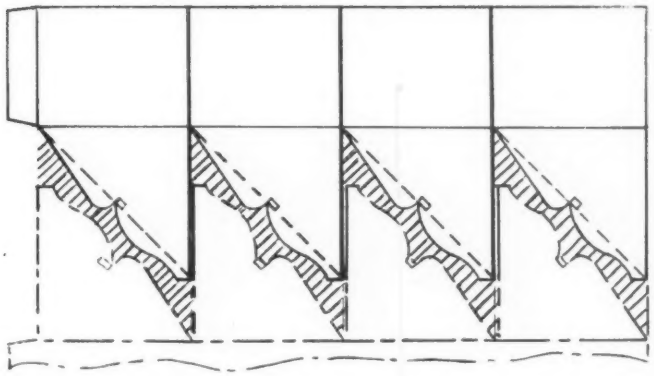

Figure 2. *This drawing, adapted from the patent, shows typical nesting pattern of original blank, with spacing to allow for double knifing when die cutting. Dotted oblique line is true hypotenuse of triangle. Crosshatched area indicates stock waste.*

Resources in expired patents

Construction designs that were impractical in their day can be restudied and adapted to today's facilities: a single example serves to prove the point. *By S. J. Leone**

An area of packaging wealth hitherto untapped to any great extent lies in the voluminous fund of expired patents closeted in the Washington archives. Among those of immediate interest and possible application in the field, the art with reference to construction design is most significant.

A random sampling of these inventions reveals features that, per se, seem to have little practical application with respect to current standards of high-speed conversion methods and functional utility as product vehicles. But, stripped of paraphernalia, many of them possess a common character that is a delight to the serious student of carton design: they are *basic* in form, reflective of the embryonic stages of packaging in general and carton-construction development in particular. Using the criterion of simplicity as a point of departure, one has only to use a little imagination, and a facility for innovation, to effect a winner.

An illustrative case in point follows:

The bottom construction illustrated in Figure 1 embodies the invention of an expired patent dating back 37 years (Laubersheimer, R. H., U.S. 1,509,735—1924). The subject matter describes a carton of the regular polygon order having identical bottom flaps each substantially triangular; the notched oblique edges extending beyond the limits of the hypotenuse serve to effect a tandem overlapping arrangement with locking conformations at the bottom mid-point. Significantly, the overlap and locking devices function to reinforce the carton bottom and, as such, are organic to the form of the invention and essential to its preferred use. (See illustration in Figure 2.)

Accordingly, the inventor infers prime application to products of rather large proportions: "Although the invention has a desirable field of application to larger boxes, say of more than a foot cube, as, for instance, to millinery boxes, the container is not limited to such use. . . ."

The prime objectives listed in the disclosure are to provide a box as described, with a minimum of waste material, that can be easily set up and which is unlikely to come apart in use.

On evaluation of the first objective with respect to a carton of rectangular [*Continued on page 138*]

*Packaging Manager, Stanley Hand Tools Div., The Stanley Works, New Britain, Conn.

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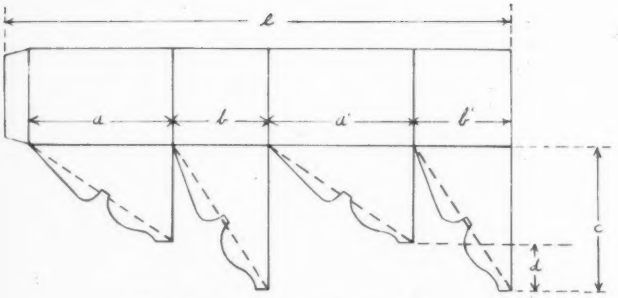


Figure 3. *In adapting the original design to a carton of rectangular proportions, the relationship of material consumption and panel size is indicated as follows: As panel (b), variable, decreases in size, length of leg (c) increases. Thus, material consumption for bottom closure layout increases by (d) x (c).*

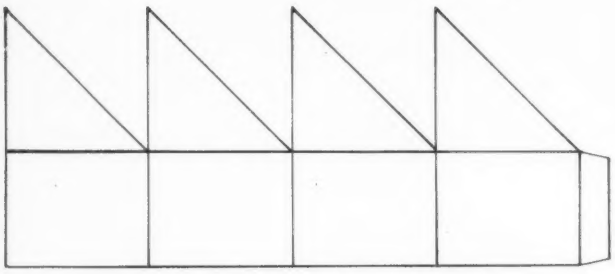


Figure 4. *Here, the contoured oblique edges and notch locks of original patent are deleted, revealing identical pairs of right triangles.*

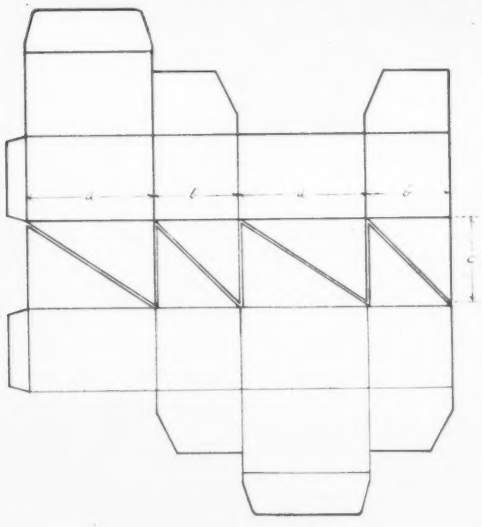
[*Continued from page 135*] proportions, material consumption increases in direct proportion to a decrease in the side (smaller) panel, as shown in Figure 3. The efficiency of layout therefor is predicated and restrictive to square cartons, thereby greatly reducing possible areas of application.

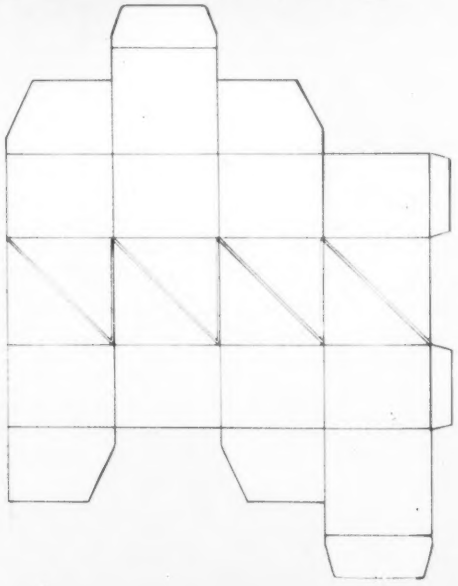
With respect to carton set-up, the author had envisaged bottom forming as a function of carton opening: "In the preferred embodiment, the flaps connected to the lower edges of the side walls move by a direct swinging action into interlocking relationship to form the box bottom. Preferably, the movement of these flaps to operative position is semi-automatic, initial movement toward such position and into overlapped relationship occurring as a consequence of the unfolding or opening of the side walls, and the only operation to complete the set-up is simply a single direct push on the overlapped flaps of the carton to force them downward into interlocked relationship."

This would necessitate gluing on a right-angle machine to effect folding the unglued bottom members into the carton body prior to gluing the manufacturer's joint. Any advantage thus gained in the semi-automatically formed bottom closure would cancel out a costly gluing operation.

All available evidence inherent in the body of the invention and objectives of the disclosure indicate the product of a keenly analytical mind limited only by time and circumstance. In view of the primitive status of machinery development, cost methods and

Figures 5 and 6. *Two drawings illustrate typical nesting patterns for two-up layout for rectangular and square cartons. Note the full utilization of stock, elimination of shipping and simplification of die-making procedure. In contrast with rectangular carton in Figure 3, leg (c) in Figure 5 is proportioned and equal to side (b). As side (b) decreases, leg (c) decreases proportionately and determines the limit on material usage.*





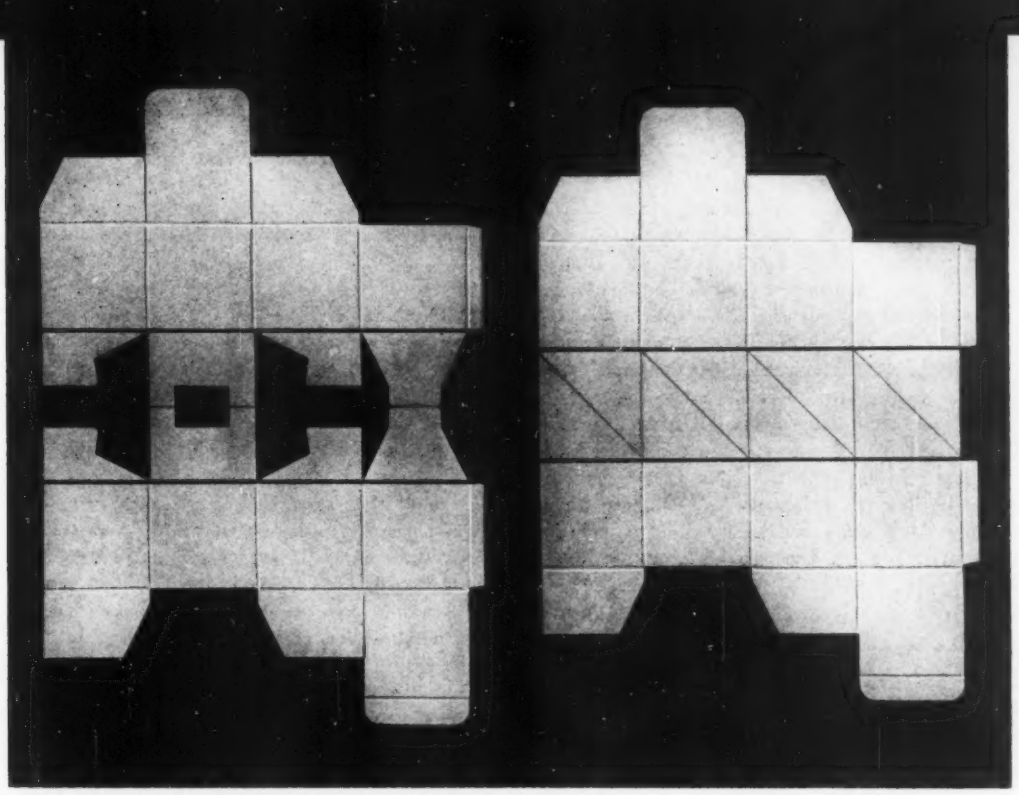


Figure 7. *Pictured at the left is the conventional "snap-lock bottom" and, at right, the triangular carton bottom, both of which are shown in typical nesting fashion. Heavy horizontal lines represent the limits of material required for a set of respective closures. Note the dramatic evidence of stock economy and manufacturing simplicity which is revealed in these illustrations.*

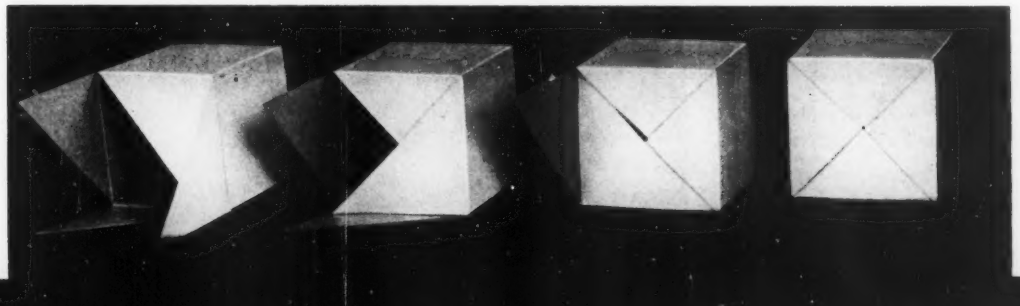
marketing and merchandising requirements that existed four decades ago, it may be concluded that the author was born, to turn a phrase, 40 years too soon. It is a speculative but probable assumption that had the disclosure been made today, with the accumulated mountain of packaging technology available, the form of the invention would be modified to accommodate the stated objectives precisely in conformity with contemporary norms and needs.

Retaining the spirit of the invention and altering the bottom appendages to the prime generic form, identical pairs of right triangles evolve. (See Figure 4.) The mechanics effecting bottom closure remain as in the parent invention, except that the bottom flaps are folded into the carton body from without, after gluing, and optionally as an automated function on customer packaging equipment. The contoured oblique edges and notch-lock devices are deleted. Admittedly, the weight-carrying potential is thereby reduced; however, if the new form is limited in use to products of moderate size and weight, important advantages materialize.

The significance of the evolved form with respect to conversion economies is dramatic. Figures 5 and 6 illustrate the typical nesting arrangement for both square and rectangular cartons. Note the full utilization of stock, complete elimination of stripping and simplification of die-making procedure by straight, single knifing. On a comparison basis with the popular "snap-lock bottom" (four-flap bottom lock), a stock saving of 10% per blank is par. (Figure 7.) Add to this the savings in stripping costs and die-making time, and a substantial competitive edge is gained in conversion, where profit margins today are markedly small and shrinking.

The possibility of effecting bottom closure on automatic packaging machinery appears to fall well within the practical limits of existing equipment. In

Figure 8. *Photograph shows one possible flap-closing sequence on the triangular bottom.*



fact, the new bottom seems perfectly adaptable to the Bivans "Tuck-O-Mat" and "Convey-O-Mat" machines, Models 50 and 54 respectively, with attachment for closing interlocking four-flap bottom locks. Inasmuch as the flap-closing sequence on the triangular bottom is arbitrary, the adaptation is made that much simpler. The attendant photograph (Figure 8) shows one possible closing sequence.

Utilizing corrugated media, the same dramatic effects with regard to economy of manufacture hold true; however, the familiar vertical slotting pattern should be incorporated to preclude binding when the appendages are raised into the carton body in the forming process. The result is a carton of extremely great weight-carrying potential that suggests new areas of application for the die-cut corrugated carton. Where it may be desired to use the triangular bottom as an easy-opening device on shipping containers, the blank layout assumes the form of a modified regular slotted carton with bottoms nested. Converting the blank involves two operations: first, through the printer-slotter and, secondly, through a die cutter to effect the final form. Note that there is no stripping involved in the die-cutting operation. (See Figure 9.)

The new form is unique with respect to merchandising potential; the geometrics and symmetry of the closure contrive to suggest myriad patterns of color and copy and, in fact, give vent to utilization as a decorous top opening. Figure 10 shows one of many possible combinations and patterns.

The subject matter of this article is relevant only to the extent that another chapter in a rather voluminous text has unfolded. Numerous instances can be cited to demonstrate utilization in present-day markets of inventions embodied in the expired art. Among those used to practical advantage are the "snap bottom," the "Himes bottom" (automatic lock bottom) and its many ramifications, as well as some of the sleeve-locking devices which are employed on canned-beverage carriers.

Much of the rich and inspiring source of material which in part provided the basis for this article should be fully exploited by responsible research and development organs within the packaging industry. It is incumbent upon them to include in their curriculum a diligent and comprehensive study of expired art; handsome dividends can very well materialize from the renascent forms.

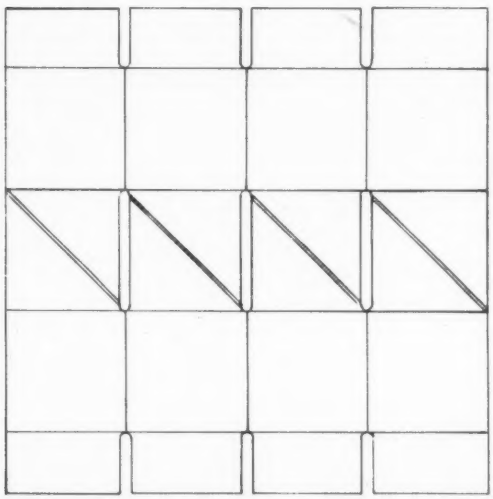


Figure 9. *Drawing (in black line) illustrates a slotted shipping container as it emerges from the printer-slotter. Heavy lines indicate the blank emerging from the die-cutter evolving the final form. Note that there is no stripping at all involved in the die-cutting operation.*

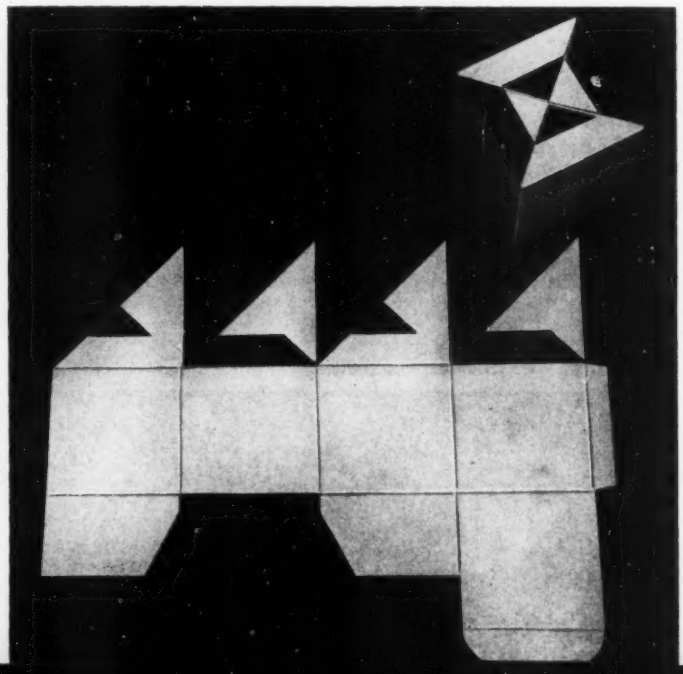


Figure 10. *The new carton form is unique with respect to merchandising potential. The geometrics and symmetry of the closure suggest myriad potential patterns of color and copy.*

Another manufacturer of a nationally known product chooses a Cleveland container. It's RA-PID-GRO, the miracle plant food! This attractive container has a smooth, colorful green label which is pleasing to the eye. The bright tin plate bottom and top complete the unit. For perfect function, the plug fits snugly into the top ring. And *the container is inexpensive!*

Your product probably will require a different type of container. It may be square or oblong instead of round. *Or* it may have a transparent plastic C-Thru body instead of paperboard. *Or* the closure may be one of the new "Dial-O-Matic" plastic sifting and pouring designs. *Or* you may want a moisture and grease resistant liner of parchment, glassine, aluminum foil or some plastic film. Foil labels may be used for added protection and brilliant display.

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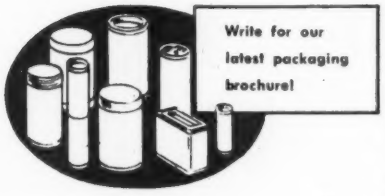

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Tackiness in polyethylene

Q: *We have recently run into a problem with 2-mil polyethylene bags becoming tacky to the touch after being on dealer shelves for a short time. These bags are printed and contain medium oatmeal, corn-meal and cracked-wheat cereals.*

If the filled bags were stored near a heat source such as a radiator and the polyethylene reached its softening temperature, would the polyethylene become tacky? If so, would it remain tacky after cooling? If it does remain tacky, why is it that when polyethylene is heat sealed the seal does not feel tacky after cooling? Excluding the possibility that something may have been spilled on the bags, is the application of heat the only cause of tackiness, or is it possible that there is a reaction between the polyethylene and the cereal products?

A: The tackiness of printed polyethylene bags carrying cereal products is probably due to two causes. These possible causes are (1) the inks and the printing operation or (2) the oil from the product. It is also possible that a combination of these two factors could cause the tackiness in the film.

The exposure of the bags to warm environment on the shelf would not of itself cause serious softening of the film, since ambient temperature would not usually be much over 100 deg. F. However, if these bags were exposed to direct sunlight or to continued warm storage, the effect would be to accelerate the deterioration of the product and induce reactions which would result in causing the tacky condition.

Many polyethylene films carry additives, such as slip agents, and the film is also surface treated to improve ink adhesion. Printing inks and varnishes, as well as dusting agents and other additives, can complicate the situation and inter-react with time or in warm storage. The ground cereals also carry some oils and this could migrate through the film and react with the inks or cause the surface of the polyethylene film to become dull and tacky.

Perhaps you are filling these bags with warm product. If this occurs, the mass of bags in the shipping case could stay warm for many days and the effect would be to draw the product oil to the film surface or to break down the inks. To be sure the bags are being filled with cooled cereal, you can insert a thermometer into the center of a bag taken from a filled case a few hours after packing.

A quick test will help to locate the source of this problem. Pack a sample case of printed bags and of unprinted bags with each kind of product. Then store these cases of bags at about 100 deg. F. Examine them each week. The high storage temperature will certainly cause tackiness to develop in a few weeks if it is ever going to develop. You can hold a case of each in cool storage as a test control.

This test can tell you what product is most reactive and what bag or ink combinations will not become tacky over the shelf-storage period.

Tightening of caps

Q: *We have had some trouble with caps on one of our bottled products loosening up during shipping. Yet, test bottles from the line are capped so tightly that we don't see how a housewife can even open them. How can we resolve this problem?*

A: First, check each head on your capper to make sure that all are applying equal torque. Then, examine the loosened bottles to see if product in the thread area is responsible for slippage. Finally, consult with your glass and closure manufacturers to make sure that the two packaging components are compatible. A slight redesign of the bottle finish might eliminate the condition. We also suggest that you institute a control program and regularly test your finished packages on a torque tester, adjusting your closing torque to a level that will insure a sound package but still enable consumers to open the container without undue difficulty.

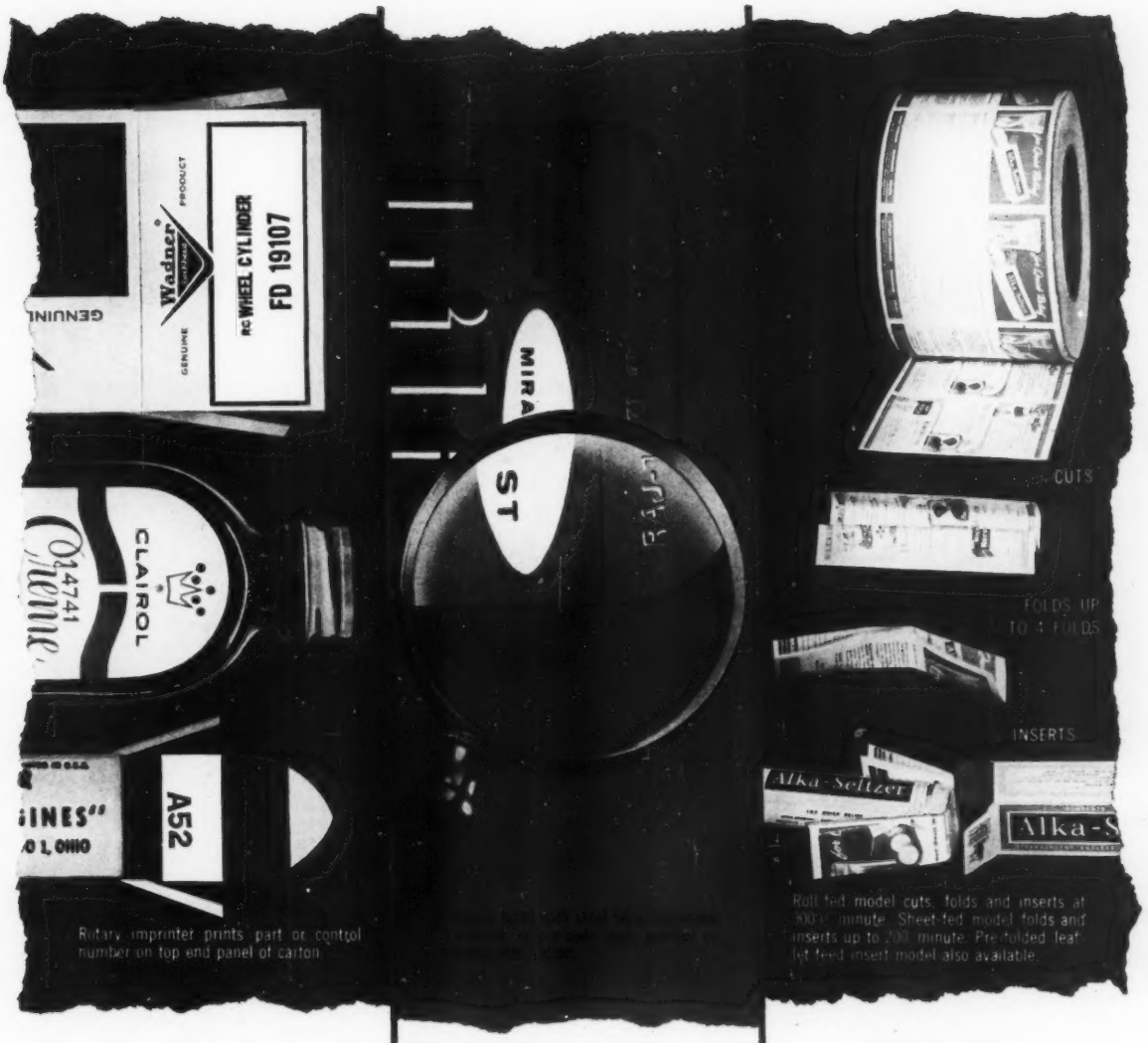
Ultrasonics for control

Q: *We are having trouble on one of our cartoning lines with a photoelectric eye that is used for line control, because of high dust conditions. The dust builds up on the light source until light transmission falls below the sensitivity of the receptor. Outside of frequent cleaning, which is time consuming, is there anything else we can do to insure continuous operation of this important unit?*

A: You seem to have ignored the logical solution to this problem—eliminate the source of the dust. This would not only improve your photo-eye operation, but would reduce maintenance on such other important and expensive machine components as motors, clutches and open gear systems. Incidentally, it would also improve working conditions for your employees. If the problem stems from your product feed, you could enclose the filling system or install vacuum dust collectors around this area that would reduce the condition.

However, if dust is unavoidable or is strictly local and not worth the expense of vacuum equipment, you might try a different device called an ultrasonic sensing and switching system which can be used for many of the operations normally controlled by a photo-eye.

This electronic unit is compact and works with invisible high-frequency sound waves, which are generated and beamed by a small transducer. The beam is picked up by a second transducer that converts the sound waves back to electrical energy with a fast-acting signal response of 20 to 50 milliseconds. Utilized in either a direct path or a reflected manner, this beam is unaffected by dust, external light or other common interferences and is said to be ideal for use in problem packaging applications.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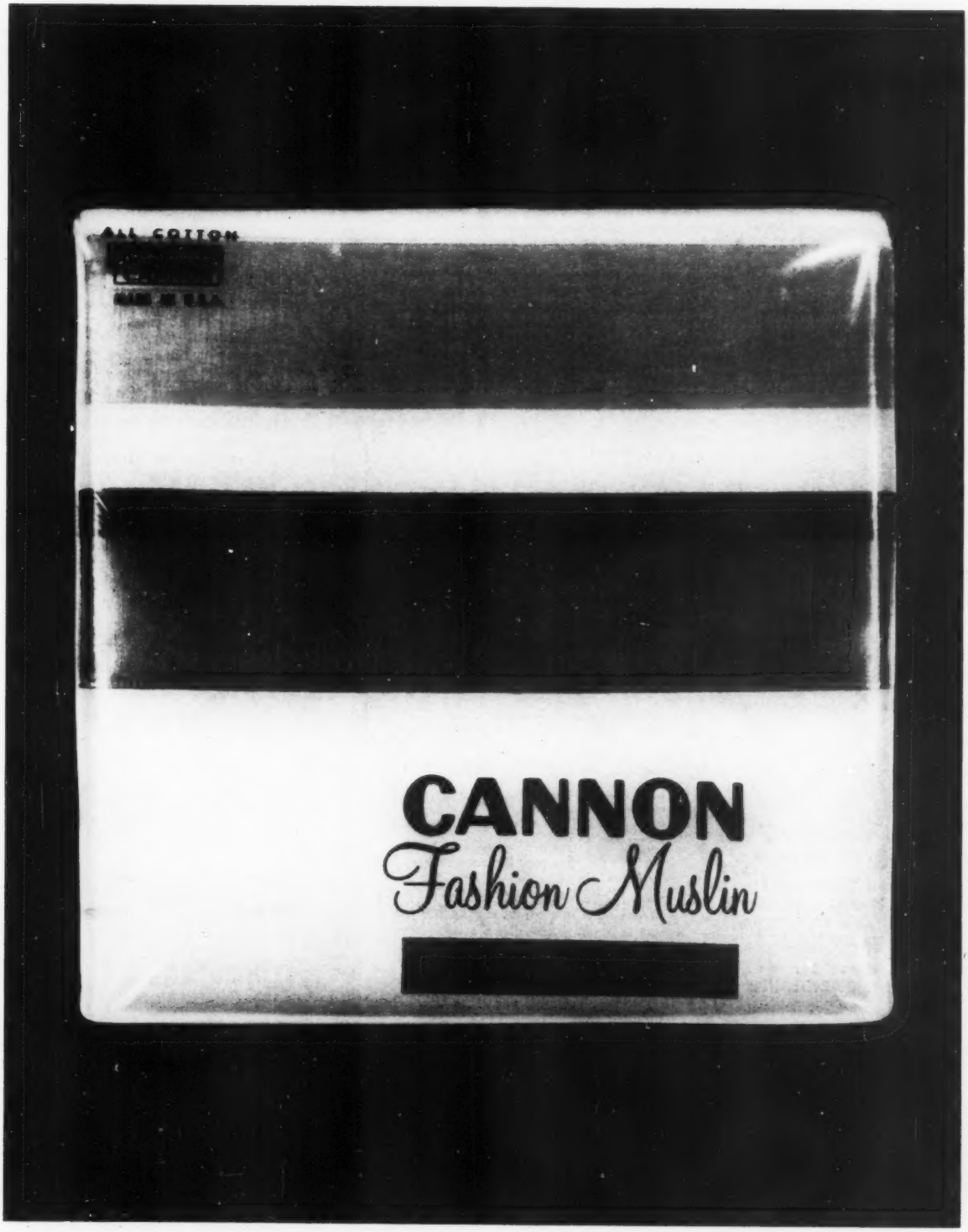


plants & people

Consolidated Aluminum Corp., Jackson, Tenn., has acquired **National Foil Co.**, Elizabeth, N. J. Present operating personnel will continue in their present capacities with National Foil's new sub. The parent company has also appointed **Fred Jones** to the post of Chicago district sales mgr.

Newcomb

Francis B. Newcomb has been elected v.p. of **American-Wheaton Glass Corp.**, a majority-owned sub. of **American Can Co.**, New York. He will be responsible for sales of the new company. Mr. Newcomb has been with American Can since 1935 and was named v.p. in charge of the Central div. in 1956. In 1958 he was transferred to New York as v.p. for commercial development.

Donald L. Faulkner, former New York district mgr., **Milprint, Inc.**, Milwaukee, has been named to the new post of v.p., merchandise mgr. He will be responsible for directing the marketing-research and product-planning depts. as well as directing the activities of Milprint's industrial sales force. Milprint has also made three West Coast managerial promotions. **Ray Schmitz**, formerly district sales mgr. in San Francisco, has been named regional sales mgr. of the West Coast. **James McFaul** has been named new sales mgr. for San Francisco to succeed Mr. Schmitz. **Richard Gresham** has been appointed mgr. of sales in Southern California.

Lorenz L. Schmidt has been elected pres. of the **Schmidt Lithograph Co.**, San Francisco. He succeeds **Carl R. Schmidt**, who has been elected board chairman. The new pres. joined the company in 1935 and most recently served as exec. v.p. and gen. mgr.

Atlas General Industries, Inc. (formerly Atlas Plywood Corp.), New York, has acquired **Kliklok Corp.**, New York, designer and producer of automatic packaging machinery. Kliklok manufactures and distributes its packaging machinery systems in the U. S., Canada, Mexico, Puerto Rico, Europe and Australia. It will be operated as the **Automated Packaging Div.** of Atlas, with no change in management.

The Plastics Div., **Koppers Co.**, Pittsburgh, has promoted **Jones P. Sipe** to product mgr., Dylite expandable polystyrene. He previously was Eastern district sales mgr. for the division. **R. R. Bench**, previously a sales representative in the Eastern district office, succeeds Mr. Sipe as district sales mgr.

The Containers Div. of **The Mead Corp.**, Dayton, has promoted **George W. Mitchell** to regional manufacturing mgr. for the Central region. He previously was district mgr. at Flint and Toledo. **Ralph Redmond, Jr.** succeeds Mr. Mitchell as district mgr. at Flint and **John A. Zinke** becomes district mgr. for Toledo.

Packaging Corp. of America, Evanston, Ill., has named **Clarence F. Klein** to the new post of director of machinery design and development. He will primarily concern himself with developing new systems of automation in packaging. Mr. Klein was formerly director of package engineering and development for **Lord Baltimore Press.**

James J. Piani, a pioneer in the development of cellophane, has retired as director of sales of **Société La Cellophane**, Paris, bringing to a close a 41-year career that spans the entire history of the world's best known and most widely used packaging film. In 1919, Mr. Piani was hired by **Jacques Brandenberger**, a Swiss chemist who invented cellophane and machinery for producing it in continuous rolls. His job was to organize and direct a sales force in France for **La Cellophane**, the company organized by Mr. Brandenberger.

Piani

Mr. Piani joined **E. I. du Pont de Nemours** in 1923, when the American company acquired the first rights to manufacture cellophane in the United States.

After five years with Du Pont, Mr. Piani went to England in 1929 as manager of **Cellophane Co., Ltd.** He served with the company until 1936 before returning to France to direct the sales of Société La Cellophane. His son, Richard, now succeeds him in that position.

The Dow Chemical Co., Midland, Mich., has completed plans to manufacture selected types of rigid plastic containers for packaging use. The installation of formed container and blow-molding equipment is under way at Dow's Findlay, O., plant. Emphasis will be placed on dairy containers (in the formed-plastics area) and on bleach and detergent bottles (in the blow-molding area).

Federal Paper Board Co., Bogota, N. J., has acquired the **Worcester Paper Box Corp.**, Medford, Mass.

Boston

William T. Boston, former v.p. of **Bartelt Engineering Co.**, Rockford, Ill., has been elected pres., following the resignation of **Harold L. Bartelt.** Mr. Bartelt continues as a member of the board and as a consultant for research and development for the firm. The Bartelt firm, a wholly owned sub. of **Riegel Paper Corp.**, New York, manufactures automatic flexible packaging machinery.

Dygert & Stone, Inc., Rochester, N. Y., distributor and converter of packaging materials and equipment, has made several executive changes. **Howard Dygert**, formerly pres., is the newly elected board chairman and **Richard Dodge**, formerly v.p., is now pres. and gen. mgr. **George M. Davis** continues as v.p. and **H. T. O'Connell** becomes secy. and treas. Mr. Dygert also will serve as consultant to the company.

In a realignment of company management, **Francis H. Ludington** becomes board chairman and chief exec. officer of **Chase Bag Co.**, New York. Succeeding him as pres.—a position he had held since 1934—is **Elliot K. Ludington, Jr.**, formerly exec. v.p. **Francis H. Ludington, Jr.**, moves up to the post of exec. v.p. **William H. Brock** has been named v.p. and asst. to the pres. **Richard H. Ayers** succeeds him as v.p.-director of sales. New v.p. of mfg. for Chase, a producer of flexible packaging products, is **John A. Book.**

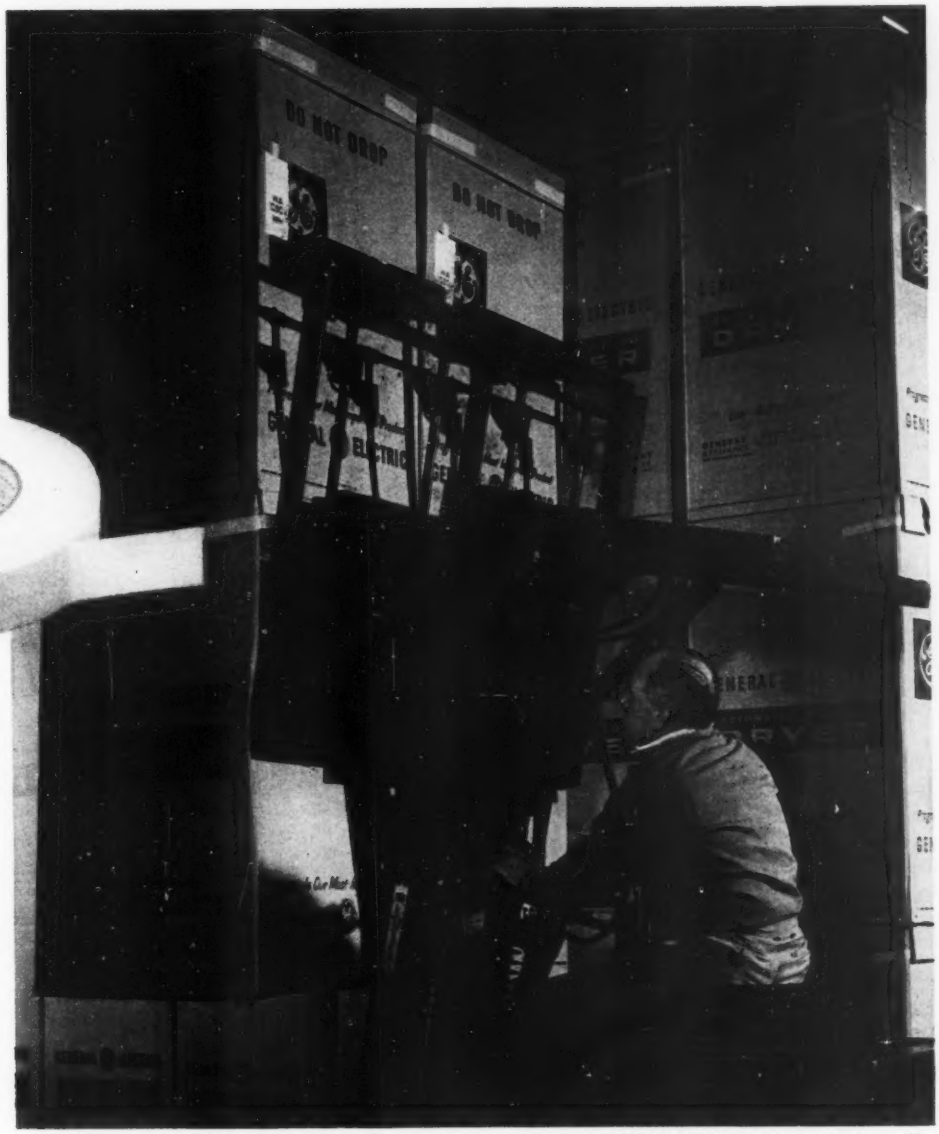
From left: F. H. Ludington, Sr.; E. K. Ludington, Jr.; F. H. Ludington, Jr.

Colin Gardner III has been appointed v.p. and gen. mgr. of mill operations for **Standard Packaging Corp.**, New York. The three operating divs. that will be under Mr. Gardner's direct supervision

New address for MODERN PACKAGING

Headquarters of MODERN PACKAGING are now located in greatly expanded offices occupying two floors of the new building at 770 Lexington Ave., New York 21, corner of 60th St. Visitors are welcomed there, to use the facilities of Reader Service and the extensive reference library on packaging and plastics. Telephone and teletype numbers remain the same.

KODACEL SHEET plus glass fibers = New PERMACEL 161 TAPE



A lift truck moves in. The operator slips the hoist blade under carton closure flaps, eases four General Electric Washers off the floor and, seconds later, drives away.

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Plants & People [*Cont'd*]

are Eastern Fine Paper & Pulp Div., Chemical Fine Paper & Paper Div. and Mississquoi Specialty Board Div. Mr. Gardner was formerly v.p. in charge of operations at Gardner Board & Carton Co. until this firm was merged with Diamond Match Co. He then became group v.p. for three of the company's divs., including Gardner.

Harold L. Barrick has been appointed mgr. of the mktg. research dept. of the **Sutherland Div., KVP Sutherland Paper Co.**, Kalamazoo.

Sloan

The **Rap-In-Wax Co.**, Minneapolis, has named **Arthur E. Sloan** to the new post of sales v.p. Mr. Sloan joined the company in 1952 as product mgr. of extrusions, laminations and government barrier sales and was later sales mgr. of the company's industrial packaging div. Most recently he has been general sales mgr. of the company.

A new sub., **Packaging Frontiers, Inc.**, has been formed by **Bemis Bro. Bag Co.**, St. Louis, to manufacture and market its Ultra-Pak machine. (See "Tetrahedral Container and Machine," MODERN PACKAGING, April, 1961, p. 76.) The Ultra-Pak forms, fills and seals a tetrahedron-shaped package designed to accommodate liquids, semi-liquids or powders.

Construction plans have been completed by Bemis for a new 200,000-sq.-ft. plant at Houston, Tex. The plant, which will manufacture paper, textile and open-mesh bags, is scheduled for full operation by the end of the year.

McDonald

Lawrence A. McDonald has been named gen. sales mgr. of the **Arthur Colton Co.** Detroit. He was formerly v.p. and gen. mgr. of the **Super Tool Co.** Colton is a manufacturer of tabletting, filling and other packaging machines for use in the pharmaceutical, chemical and food industries. The company is a div. of the **Snyder Corp.**

Rapid-American Corp., New York, has reached an agreement to purchase all of the outstanding stock of **Cellu-Craft Products Corp.**, New Hyde Park, N. Y. Cellu-Craft is a converter, designer and printer of flexible packaging materials.

Charles F. Turner has been appointed market research mgr. of **Dixie Wax Paper Co.**, Dallas, Tex. Mr. Turner will manage Dixie's design-testing laboratory and consumer-research services.

Walter X. Lawson has been appointed gen. mgr. of the Stretch Packaging Div. of **Inpak Systems, Inc.**, New York. Mr. Lawson, who previously headed his own custom-molding, vacuum-forming and

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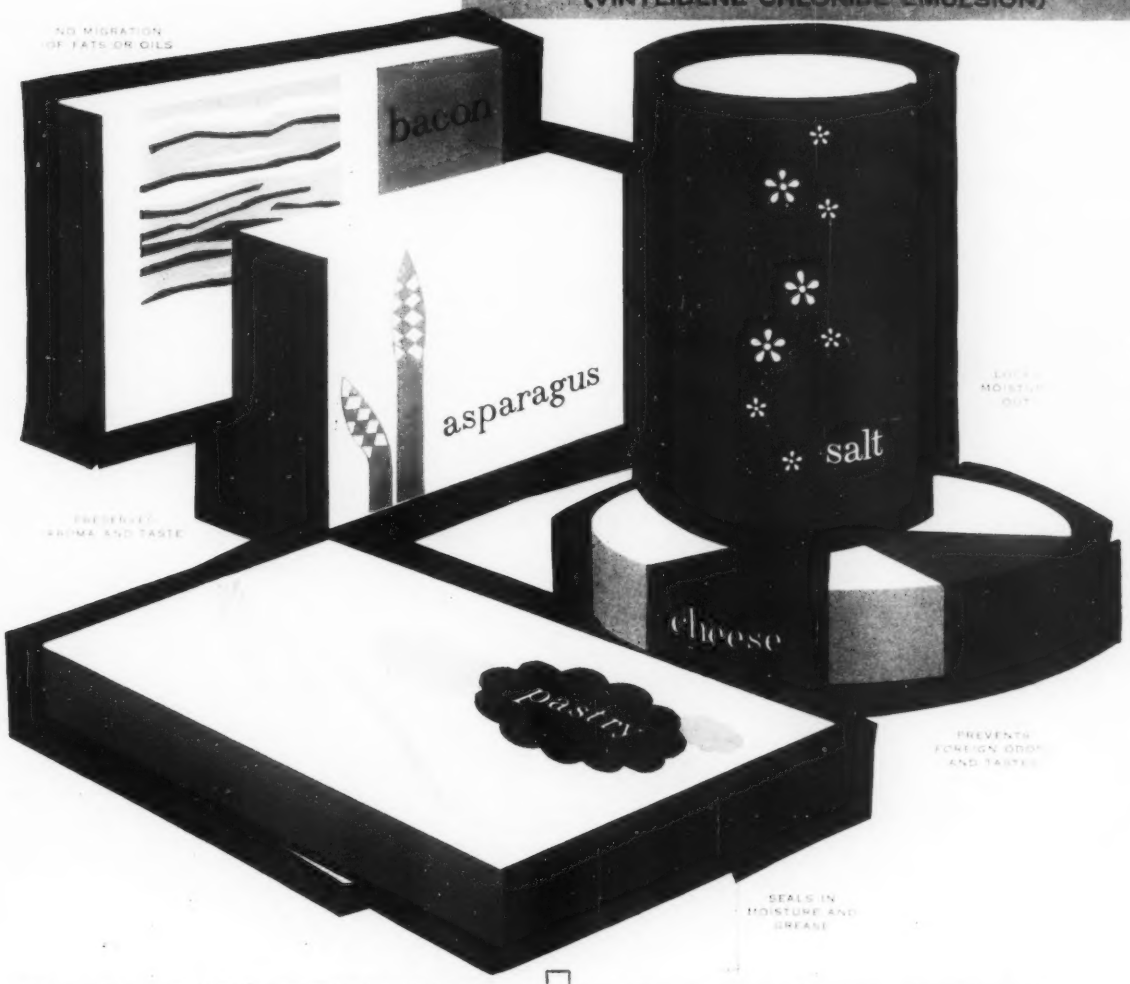

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9 of the top 10 nut growers use flexible film by Standard Packaging

In merchandising, what looks like a hard nut to crack can often be pinpointed to a packaging problem. Take nuts themselves. With the introduction of *transparent* film packaging, the whole nut business was revolutionized. Shoppers saw. Taste buds tingled. And sales soared to an all-time high. Today, this impulse buying accounts for nearly 75% of total nut sales. • Standard played a leading role in this postwar phenomenon. Major problem: how to prevent the flavorful nut oils from becoming rancid. Standard solved it by developing special laminates. These films not only provide broad visual appeal, but also keep nuts fresh and savory, add indefinite shelf life. • Have you a product that needs to be taken out of its shell? Perhaps Standard can help.

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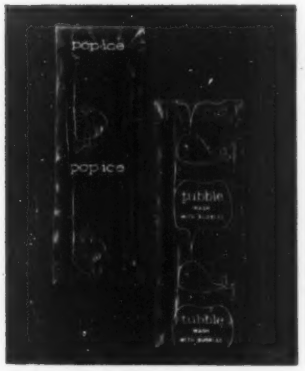
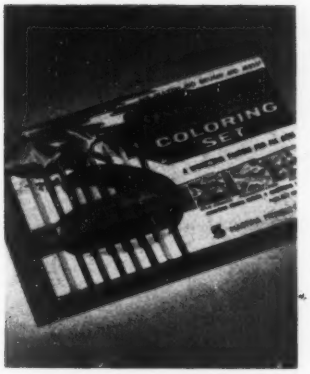
Standard Packaging's marketing approach pays off... in many unusual ways



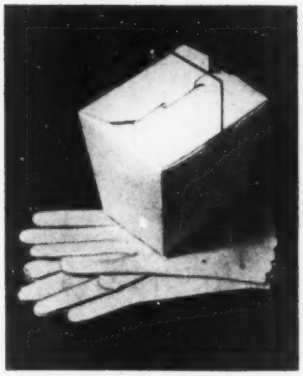
Package bubbles in winter, pops in summer

"Tubble" makes bath bubbles. "Pop-Ice" is a delicious frozen treat for kids. Made by the same manufacturer, they're marketed in liquid form. Standard's *Flexible Packaging Division* devised one basic package for both, an inexpensive leakproof poly-cel 3-pak with perforated tear-off units. Customer response exceeded all expectations. And the manufacturer is delighted with the economy of being able to use the same type package for both summer and winter items.



Peep-window draws all eyes to coloring set

To flag attention to American Pencil's new coloring set, Standard's *Bradley & Gilbert Division* designed a package with a transparent, acetate window. The carton provides full display of the colored pencils, sharpener and outlined pictures. And the palette-shaped window signifies "coloring set" at a glance. Result: impulse buying exceeded the most optimistic sales forecasts, and production had to be increased to meet customer demand.



New take-out pail leaves no trail

Leakage has always been the number one problem in carry-out service. Now Standard's *Fonda Division* has solved the problem neatly with a new, *plastic-lined* pail. This practical pail controls absorption, prevents leakage of hot, greasy foods and liquids for long periods of time. In actual comparison tests, this new Fonda pail remained rigid, neat and leak-proof—while old-style pails became saturated and leaked in a matter of minutes.

FILM AND FOIL PACKAGING • FOLDING AND SET-UP BOXES
• CLOSURES AND CAP LINERS • PAPER PAILS, CANS, TRAYS
• LABELS AND OVERWRAPS • LAMINATIONS

plastic-displays company, will coordinate the activities of the **Lynch Corp.**, Anderson, Ind., manufacturer of Stretch Packaging machinery, and **Federal Paper Board** and **Downingtown Paper Co.**, distributors of the line of Stretch Packaging machinery.

The Mead Corp., Dayton, O., has acquired controlling interest in **The Chatfield & Woods Co.** and its subs. The subs. include Chatfield Paper Corp., Union Paper & Twine Co., Grand Rapids Paper Co., Clements Paper Co. and The Scioto Paper Co.

Ylvisaker

Continental Can Co., New York, has named **Lenvik Ylvisaker** v.p. of research and engineering. Mr. Ylvisaker had been gen. mgr. of Continental's metal research and development center in Chicago. **R. N. Taylor** has been named district sales mgr. for the corrugated container div. in Atlanta, Ga. He succeeds **J. L. Wyche**, who has resigned.

Canford Mfg. Corp., Canton, Pa., a sub. of **Stanley Home Products, Inc.**, Westfield, Mass., has purchased **Klear Plastics, Inc.**, Quakertown, Pa. Klear Plastics pressure forms and prints closures and containers for the food industry. The company will continue at its present location as the Klear Plastics Div. of Canford, and will be headed by **William G. Otto**, of Canford.

Lewis A. Dibble, Sr., formerly pres., has been elected to the new post of board chairman and chief exec. officer of **Risdon Mfg. Co.**, Naugatuck, Conn., maker of aerosol valves and cosmetic and aerosol containers. **Lewis A. Dibble, Jr.** succeeds him as pres. Mr. Dibble, Jr., was formerly exec. v.p. Risdon has also promoted **Harold W. Turnblom** to treas. and **Roger G. Goodeve** to secy.

Dibble, Sr. Dibble, Jr.

A plant for the manufacture of blown plastic bottles is being built in Jersey City by **Owens-Illinois Glass Co.**, Toledo. It is the sixth such facility to be opened by the company in the past three years. Blow-molding equipment for the new 160,000-sq. ft. plant is being designed and manufactured by O-I.

Two promotions have been announced by the Paperboard Products Div. of **Consolidated Water Power & Paper Co.**, Wisconsin Rapids, Wis. **Herbert C. Nicholls** has been appointed product mgr. for corrugated containers and **Eugene Van Slambrouck**, product mgr. for folding cartons. Both men will be responsible for merchandising the

product lines they manage and will work under the direction of **John Z. Segal,** asst. general mgr. and head of divisional sales.

Richard H. Thomas, formerly of General Electric Co., has formed a new company that will specialize in all types of plastic packaging, with emphasis on thermoformed foam and molded-foam packaging. The new company, **Thomas Plasticraft, Inc.,** New Hartford, N. Y., is affiliated with **Mohawk Containers, Inc.,** Utica, N. Y. Mr. Thomas was previously senior engineer for advanced development at GE's central packaging laboratory in Schenectady.

Thomas

M. E. Ocker, since 1928 mgr. of the Wichita plant and sales div. of **Bemis Bro. Bag Co.,** St. Louis, has retired. He had been with Bemis for more than 50 years. Mr. Ocker is succeeded by **George W. Finlay.**

Specialty Papers Co., Dayton, O., converter of flexible packaging materials, has expanded into the field of extrusion coatings of polyethylene, polypropylene and nylon. **Alexander B. Beal** has joined Specialty Papers to head the extruding-coating div. An extruder-coater-laminator has been installed at the company's Dayton plant and is now in full operation.

New pres. of **Hobbs Mfg. Co.,** Worcester, Mass., manufacturer of winding machinery, cutting equipment and die presses, is **Stewart F. Oakes,** formerly v.p. and general mgr. **Willard H. Ware,** former pres. and treas., has been named board chairman. He also retains his position as treas.

After more than 25 years with **National Can Corp.,** Chicago, **Fred B. McNamara** has retired. He joined National in 1935 and served as sales v.p. In 1955 he moved to the company's executive offices in Chicago where, as a member of the executive staff, he carried out special assignments in the areas of sales coordination, advertising and public relations.

Lyman L. Campbell has been elected v.p. of engineering for **Package Machinery Co.,** East Longmeadow, Mass. Previously Mr. Campbell was v.p., gen. mgr. and board member of the **Lynch Corp.,** Anderson, Ind.

George R. Langlois, pres. of **Muirson Label Co.,** San Jose, Calif., has been elected v.p. of **Lord Baltimore Press, Inc.,** New York. Muirson Label, a producer of printed labels for consumer packages, is an affiliate of Lord Baltimore Press.

A new company specializing in gravure and flexographic printing of papers, foil, film and film combinations has been formed. Known as **Wachusett Converters, Inc.,** the company has completed the installation of equipment at 124 Water St., Leominster, Mass. and is in full operation.

Boxmakers Inc., Westfield, Mass., has appointed **Howard J. Howe** to the post of director of mktg. and sales prom. Boxmakers designs, manufacturers and markets paperboard packaging and display units.

A new firm, **Convertors' Machinery & Controls, Inc.,** 12803 W. Silver Spring Drive, Butler, Wis., has been formed. The company will offer designing, engineering and consulting services to paper convertors. **David A. Davidson** is v.p. of the company and will manage all operations. Serving as directors of the new company are: **Walter Westphal, Everett S. Faulls** and **Walter R. Stelling, Jr.**

Albert R. Perry, Jr. formerly of Airkem Inc., has been appointed director of international operations for **Precision Valve Corp.,** Yonkers, N. Y., maker of aerosol valves. According to Precision, Mr. Perry will concentrate on increasing the use of aerosols abroad.

Young

Walter M. Young has been elected a v.p. of **Richardson Scale Co.,** Clifton, N. J. He continues to direct the marketing activities of the company. Mr. Young has been with Richardson since 1948 and previously was director of sales. Richardson manufactures automatic weighing, bagging and proportioning equipment for packagers.

Anaconda Aluminum Co., Louisville, has eliminated its product-line sales groups and formed marketing groups in its three major divisions—mill products, foil and containers and restaurant and household foil. The marketing groups are responsible for coordinating sales programs with production, research and development, market research, advertising and promotion. Each group is headed by a divisional marketing mgr., and includes several product mgrs.

Sam H. Popovich has been named technical director of **Westfield River Paper Co.,** Russell, Mass. Mr. Popovich, formerly director of technical service and development for the Paper Chemicals Div. of **W. F. & H. Jordan Mfg. Co.,** Philadelphia, will be responsible for all technical operations at Westfield's glassine and greaseproof mills at Russell and Lee, Mass. and at West Conshohocken, Pa.

The **Condes Corp.,** Milwaukee, sales rep. of machinery for the paper-converting, graphic-arts and packaging fields, has formed a new sales organization designed to offer world-wide service. **R. O. Martin, Sr.,** is pres. of the company. **R. O. Martin, Jr.,** is v.p. **Frank Boughton** has joined the company in an executive capacity. He will coordinate the designs of a line of high-speed, narrow-web flexographic presses, says the company.

Three executives of **Mosinee Paper Mills Co.,** Mosinee, Wis., have been elected to the position of v.p. **Robert T. Seith,** formerly sales mgr., is now v.p., mktg.; **John McPherson,** formerly plant mgr., is now v.p., operations, and **Clarence Scholtens,** formerly controller, is now v.p., finance.

Al Cantor, formerly of National Transparent Mfg. Co., has been named sales v.p. of **M. Korn Packaging Co.,** New York. The company designs and manufactures polyethylene packaging.

What is claimed to be the first modern mass-production can-making plant in the Philippine Islands is now in operation. Supplied by **E. W. Bliss Co.,** Canton O., the can-manufacturing line is being operated by **Standard Can Co.,** a sub. of a Philippine realty firm. Current output of the line is 350,000 cans per day, with an annual production goal of 90 million units. At present, the line's entire production is being used by a milk canner.

E. S. & A. Robinson (Canada) Ltd., Toronto, has appointed **W. G. Reid** to the post of technical director. Mr. Reid has been associated with packaging for many years in both the U. S. and Canada. Robinson Ltd. designs packages and prints packaging materials.

Spencer Chemical Co., Kansas City, has completed plans to consolidate the technical laboratory activities of its Plastics Div. at its Orange, Tex., polyethylene plant. The move is designed to put under one roof complete facilities for solving customers' technical problems, evaluating competitive and experimental products and improving processing techniques.

Celanese Corp. of America, New York, has appointed **James R. Kennedy** to exec. v.p., finance and administration. He will direct corporate financial planning and administration, stockholder relationships, industrial relations and

Kennedy *Brooks* *KixMiller*

public relations. **John W. Brooks** has been named exec. v.p., domestic operations. He will direct the corporation's four domestic operating companies—**Celanese Fibres Co., Celanese Chemical Co., Celanese Polymer Co.** and **Celanese Plastics Co. Richard W. KixMiller** has been named exec. v.p., international operations. He will direct Celanese interests and activities outside the United States.

Canadian rights to **Dover Molded Products Co.'s** process for molding linerless closure caps from high-density polyethylene have been acquired by **Du Pont of Canada, Ltd.** (See "New Polyethylene Can-or-Bottle Cap," Mod-

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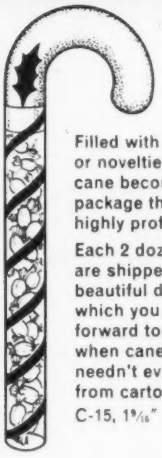


Filled with candies, toys or novelties, this Christmas cane becomes a fast-moving package that commands a highly profitable unit price.

Each 2 dozen canes, empty, are shipped to you in a beautiful display carton . . . which you, in turn, can forward to display your wares when canes are filled. Canes needn't even be removed from carton to fill!

C-15, 1⅛" diameter x 18"

Double-duty shipping and display carton, printed in red and green Christmas motif—appropriate for whatever merchandise you use to fill the canes.

ROUND TUBES AND CORES CO.
801 N. Peoria St. • Chicago 22, Illinois

Plants & People [Cont'd]

ERN PACKAGING, May, 1960, p. 154.) The license also gives Du Pont of Canada exclusive rights in 10 European countries and Japan.

Minnesota Mining & Mfg. Co., St. Paul, has begun construction of a new branch sales office in Needham, Mass. The new facility reportedly will provide more than twice the space available at 3M's present Northeast sales office in Newton Center, Mass.

Sealomatic Electronics Corp., Brooklyn, has opened a New York City office and showroom at 38 W. 32 St. The company makes electronic heat-sealing and blister-packaging machinery.

Rhinelander Paper Co., Rhinelander, Wis., has established a sales office at 3596 Robroy Dr., Cincinnati. The company, a div. of **St. Regis Paper Co.**, produces glassine and greaseproof.

Croy

Leo E. Croy, former v.p. of **Marathon**, has been elected exec. v.p. and board member of **Floseal Corp.**, San Francisco. He will represent Floseal east of the Rockies, licensing its patented plastic cutting and creasing process to folding-carton manufacturers. The new method is said to guarantee folding-carton accuracy in ultra-high-speed packaging. Marathon, Container Corp. of America and First Carton Corp. are among the present licensees of the process.

Del Val Ink & Color, Philadelphia, has appointed **John B. Plunkett** to its organization. He will fill both sales and technical service functions. Mr. Plunkett was most recently flexographic product mgr. for the **GPI Div.** of **Sun Chemical Corp.**

The **Pantasote Co., Panta-Pak Div.**, New York, has licensed **Sherman Paper Products Co. of California, div. St. Regis Paper Co.**, to handle sales of Panta-Pak polyvinyl chloride trays in the 11 Western States, Alaska and Hawaii. The contoured, one-piece PVC trays are used in the packaging of candies, fruits, biscuits and other products.

American Cellular Corp., Miami, is now manufacturing a line of plastic bottles ranging from 8 oz. to 1 gal.

Howard Blonder & Associates, package design, is now in new quarters at 8353 Second St., Downey, Calif.

A new plant in Houston, which will manufacture corrugated paperboard packaging products, is being opened this month by **Container Corp. of America**, Chicago. The plant is equipped with a printer slotter and with die-cutting, taping, gluing and stitching equipment.

As part of a program to introduce new coding, printing and marking machinery here and abroad, **Bell-Mark**

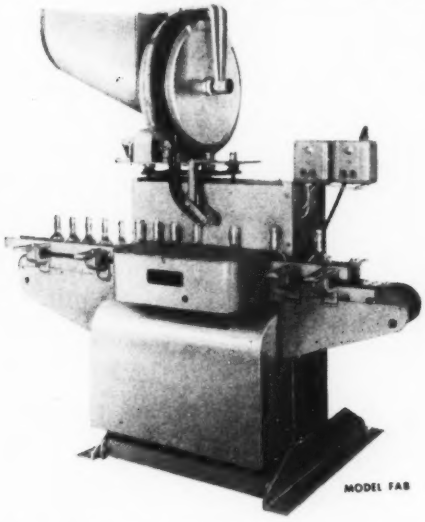
RESINA

fully automatic

FITMENT APPLICATOR

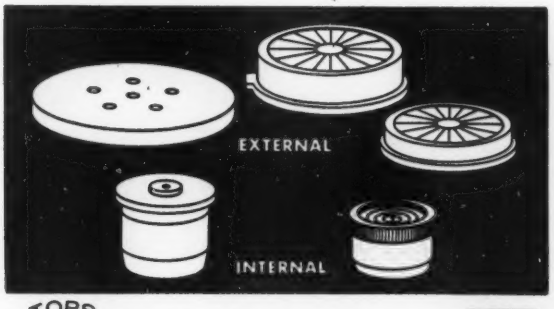
specially designed for the

FOOD, COSMETIC and **DRUG** industries



We manufacture Capping machines for every type of fitment . . . solid or perforated with or without tabs for exterior or interior use.

Capacity from 20 to 120 fitments and up to 300 per minute depending on fitment and container.



TOPS THEM ALL

Consult a RESINA packaging and sealing specialist regarding your special problem.

PMMI

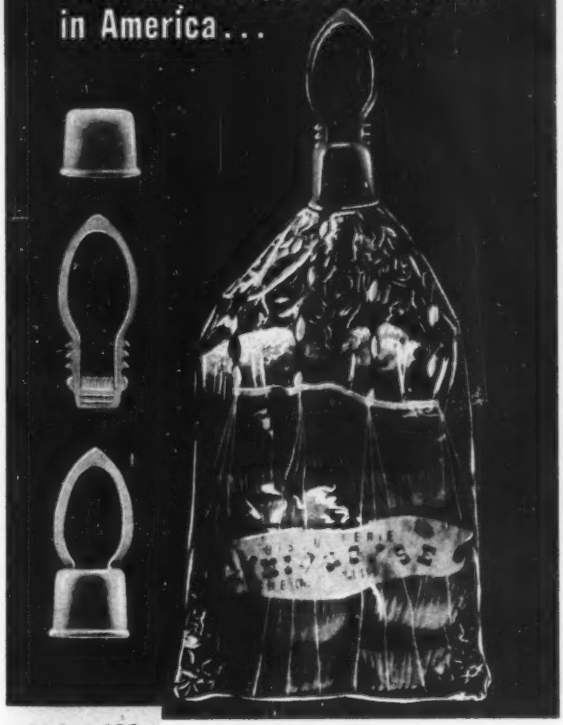
RESINA AUTOMATIC MACHINERY COMPANY, INC.
572 SMITH STREET BROOKLYN 31, N.Y.
Agents in Principal Cities

Never Before a Closure Like This...

Kisco-Bip

Pat. Pending

First and Finest PLASTICLIP in America...



Simple as A-B-C

- **Air-Tight Closure**
- **Versatile, Reusable**
- **Ideal for Display Racks**

It's here—newest, most exciting advance in today's packaging — the KISCO-BIP PLASTICLIP. . . . Tremendously successful on the Continent, this patented clip is now earning great acceptance as an American-made product. A foolproof, sanitary, easily-attached closure for polyethylene bags, it offers airtight protection against humidity, leakage, odors, mildew, hardening, temperature changes, decomposition. Made in a variety of colors, in three sizes to fit all types of bags. KISCO-BIP is used both for original closure—or included in packages for all resealing purposes.

Write for complete data on how Kisco-Bip can increase Your sales

KISCO-BIP CORPORATION
JOHN L. RIE, Inc. Sole Mfrs. and Distributors
196 Ashburton Ave., Yonkers, N.Y. • Phone YOnkers 5-9570

GREATER USABILITY
STIMULATES
GREATER SALABILITY
FOR A POPULAR PRODUCT

New Pres-o-Matic applicator by Dab-o-Matic Corp. with handy custom-molded plastic threaded body precision-produced by Dillon-Beck.

When consumer convenience counts, count on
DILLON-BECK
SPECIALISTS in CUSTOM MOLDING and SALES-STIMULATING PLASTIC PACKAGING

★ DESIGNS & MODELS
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HILLSIDE, NEW JERSEY

Plants & People [*Cont'd*]

Corp., Newark, has appointed two new sales-rep. companies. They are: Rocke International Corp., New York, and L. F. Shattuck Co., Atlanta.

The **Imco Container Co.**, Kansas City, a div. of **Rexall Drug & Chemical Co.**, has moved its Chicago sales office to larger quarters at 711 Devon Ave., Park Ridge, Ill.

Print All Corp., package imprinter and decorator, has moved to expanded quarters at 116 Nassau St., Brooklyn 1.

Stone

S. Byron Stone has been appointed advtg. and sales prom. mgr. of **S & S Corrugated Paper Machinery Co.**, Brooklyn. According to the company, Mr. Stone is expected to organize a promotion program to keep pace with the increased marketing activities of the expanding S & S organization. He is a veteran in the industrial advertising field and at various times has directed advertising and promotion for industrial machinery.

The **Robertson Co.**, formerly located in Brooklyn, has moved into its own building at 93-08—95th Ave., Jamaica 16, N. Y. Robertson manufactures greaseproof and waterproof papers, other barrier materials, case liners and industrial tapes.

Altamil Corp., Indianapolis, has purchased the wirebound box and crate manufacturing assets of **Indianapolis Wire Bound Box Co.**

Rafco Plastics, Inc., formerly located in Garfield, N. J., has moved its plant and headquarters to larger facilities at 48-58 Oak St., Clifton, N. J. **Edward Ringley** is pres. of the company, which is an extruder of blown polyethylene.

Promotions

Rocco L. Locantore: to sales mgr., **Fluid Chemical Co.**, Newark. Fluid Chemical is a contract packager of liquid and aerosol products.

Graham J. Ross: to mgr., Chicago sales office, **Pneumatic Scale Corp.**, Quincy, Mass. Mr. Ross, who joined the company in 1950, succeeds v.p. **A. Thomas Buskens**, who died last January.

Charles F. Claughsey: to consultant to the exec. v.p., **Emhart Mfg. Co.**, Hartford, Conn. **John E. Crouse:** to mgr. of technical sales and service for Emhart's Hartford Div. Emhart makes glass container-manufacturing equipment.

Lawson Wilder: to mgr. of sales service, **Ludlow Plastics**, div. Ludlow Corp., Needham Heights, Mass.

Henry P. Trounstine: to v.p., **Clopay Corp.**, Cincinnati. Mr. Trounstine has been gen. mgr. of the company's extruded-products div. since 1959. The div. produces and markets extruded polyethylene and vinyl packaging and industrial films.

Joseph I. McCormick and **John T. Hastings:** to product mgrs., industrial sales div., **The Dobeckmun Co., Div. The Dow Chemical Co.**, Cleveland. Mr. McCormick will be responsible for graphic-arts products, custom laminations, coated products and military barrier materials. Mr. Hastings will be responsible for all tapes (except control tape) and Metlflake decorative metalized film.

William H. Berlin: to exec. v. p., **Walter P. Miller Co.**, paper-box manufacturer, Philadelphia. Mr. Berlin was formerly v.p. and gen. mgr. of **Niagara Box Co.**, which was purchased by Miller in 1959.

Paul Martersteck: to West Coast sales mgr. for Celon plastic screw cap and plastic tube operations, **Thatcher Glass Mfg. Co.**, New York. **Timothy W. J. Costello:** to San Francisco branch mgr., all Thatcher operations.

Louis E. Georgevits: to mgr. of technical sales to the paper industry, Thermoplastics Div., **The Borden Chemical Co., div. The Borden Co.**, New York.

Daniel J. Gallagher, production v.p.: to product mgr. for metal decorating inks, **Crescent Ink & Color Co.**, Philadelphia. **Edward Wade:** to product mgr. for offset and letterpress paper inks. **James Carney**, tech. director: to product mgr. for rotogravure inks. **Ray Welte:** to mgr. for flexographic inks.

Robert P. Simoncini: to asst. sales mgr. Machine Div., **Hobbs Mfg. Co.**, Worcester, Mass. The company is a manufacturer of winding machinery, cutting equipment and die presses.

Appointments

Chester Kotecki: to v.p. and general mgr. **Standard Molding & Cap Co.**, Hillside, Ill. The company is an injection molder of plastics, specializing in consumer-packaging products.

Fred Jones: from **Kaiser Aluminum** to Chicago district sales mgr. **Consolidated Aluminum Corp.**, Jackson, Tenn., producer of aluminum foil.

Robert G. Nichols: from **Par-Pak, Inc.** to new-products mgr. **Plastic Packaging Co.**, Chicago. The company produces extruded polyethylene film and converted products.

Andrew Fay: to sales mgr., Northeast Div., **Paramount Packaging Corp.**, Philadelphia, printer and converter of flexible packaging materials. Mr. Fay will have offices in Needham, Mass.

Robert B. Newman: to v.p. of **Vulcan Containers Pacific, Inc.**, San Leandro, Calif. The company is one of seven steel-container manufacturing plants of **Vulcan-Associated Container Companies, Inc.**, Birmingham, Ala.

Kenneth E. Mann: from **General Printing Ink Div., Sun Chemical Corp.** to New England district mgr., **Flint Ink Corp.**, Detroit. His headquarters are at Needham, Mass.

PACKAGE MAKES THE DIFFERENCE

PACKAGE... AND PLASTICS

Your products . . . packaged in plastic? Perhaps it isn't as far off as you might imagine. For today major marketers are seeking the newer, better means of merchandising that plastic packaging gives.

Package Machinery saw this seven years ago, purchased Reed-Prentice to become the first manufacturer—and is today still the *only* one—to offer both packaging and plastic injection molding equipment.

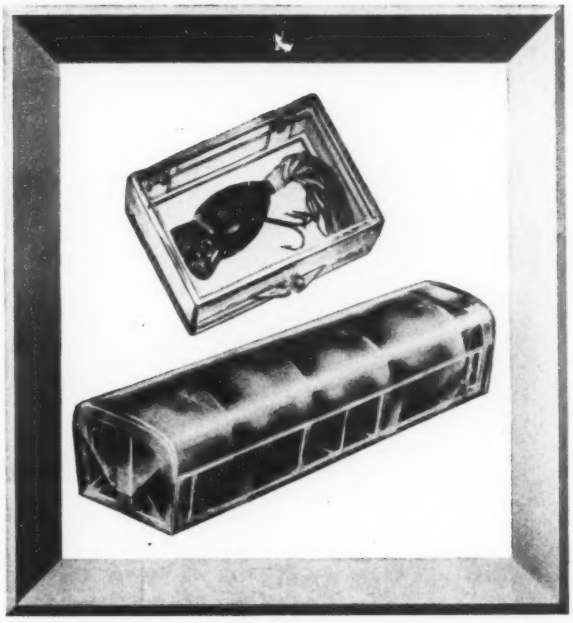
You can see the results at the coming Plastics Exposition, where the Reed-Prentice Division will display the new concept of "building block" molding equipment that allows you to "tailor" machines to your own needs.

For those considering the possibility of packaging-in-plastics, a visit to Booth 721-729 could be well worth while. Or, if you don't plan to attend, ask your Package representative to put you in touch with his Reed-Prentice associates.

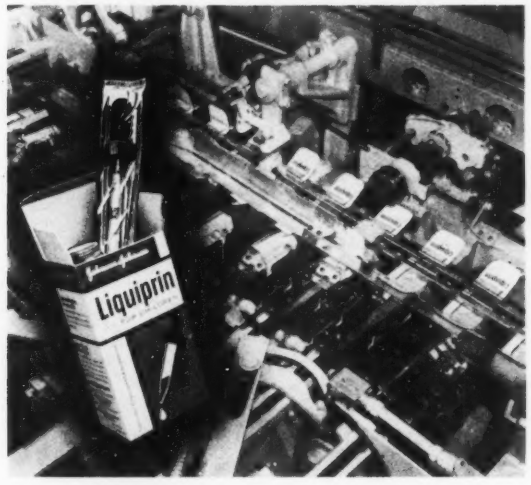
PACKAGE

PACKAGE MACHINERY COMPANY,
EAST LONGMEADOW, MASS.

NEW YORK • PHILADELPHIA • ATLANTA • BOSTON
CLEVELAND • CHICAGO • KANSAS CITY • DALLAS • HOUSTON
LOS ANGELES • SAN FRANCISCO • SEATTLE • TORONTO • MEXICO CITY



PUT PLASTIC PACKAGING IN YOUR PROFIT PICTURE



SOLVED: *Another packaging problem by America's most versatile dropper!*

Colonial engineers solved Johnson & Johnson's dispensing problem for its LIQUIPRIN* by placing both dropper assembly and printed insert in a self-enclosed "boat". Result: An attractive all-in-one dropper-plus-instructions unit that keeps the bottle snug in the box.

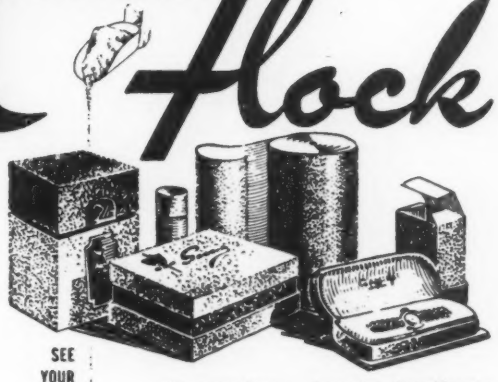
May we help solve your dispensing and packaging problems? We have representatives near you.

**Trademark For Salicylamide Suspension*

COLONIAL APPLICATOR CO.
VINELAND, NEW JERSEY

The Packaging Industry's Magic Carpet!

CLAREMONT Flock



SEE YOUR PAPER MERCHANT FOR:
Flock-Affixed Papers ...IN ROLLS
Boxboard ...IN SHEETS
(18 brilliant colors)

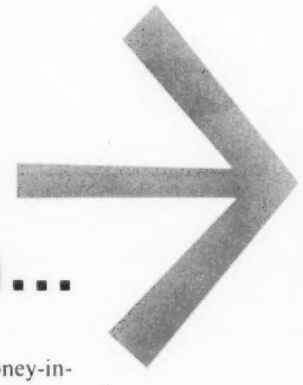
—Claremont Flock . . . those tiny clipped-lengths of luxurious cotton and regal rayon. We market this irresistible outer raiment in bulk to paper processors, product manufacturers, packaging specialists and display builders who, for dramatic enrichment, apply it to paper, glass, metal, cork, plaster and similar materials.

Flock is a fascinating stimulant—and for pennies, an ounce adds a pound of allure. Check your suppliers—or, for complete information, feel free to contact us direct.

CLAREMONT FLOCK CORPORATION
The Country's Largest Manufacturer of FLOCK
CLAREMONT, NEW HAMPSHIRE

from ALCOA

Meet 24 frozen juices that will save millions with cans of aluminum...



These frozen juice concentrates have a nice family expression . . . "money-in-the-bank" . . . an expression which means that aluminum cans will save millions of dollars in shipping costs in the years ahead. Why? Because aluminum weighs far less than any other metal used in canning.

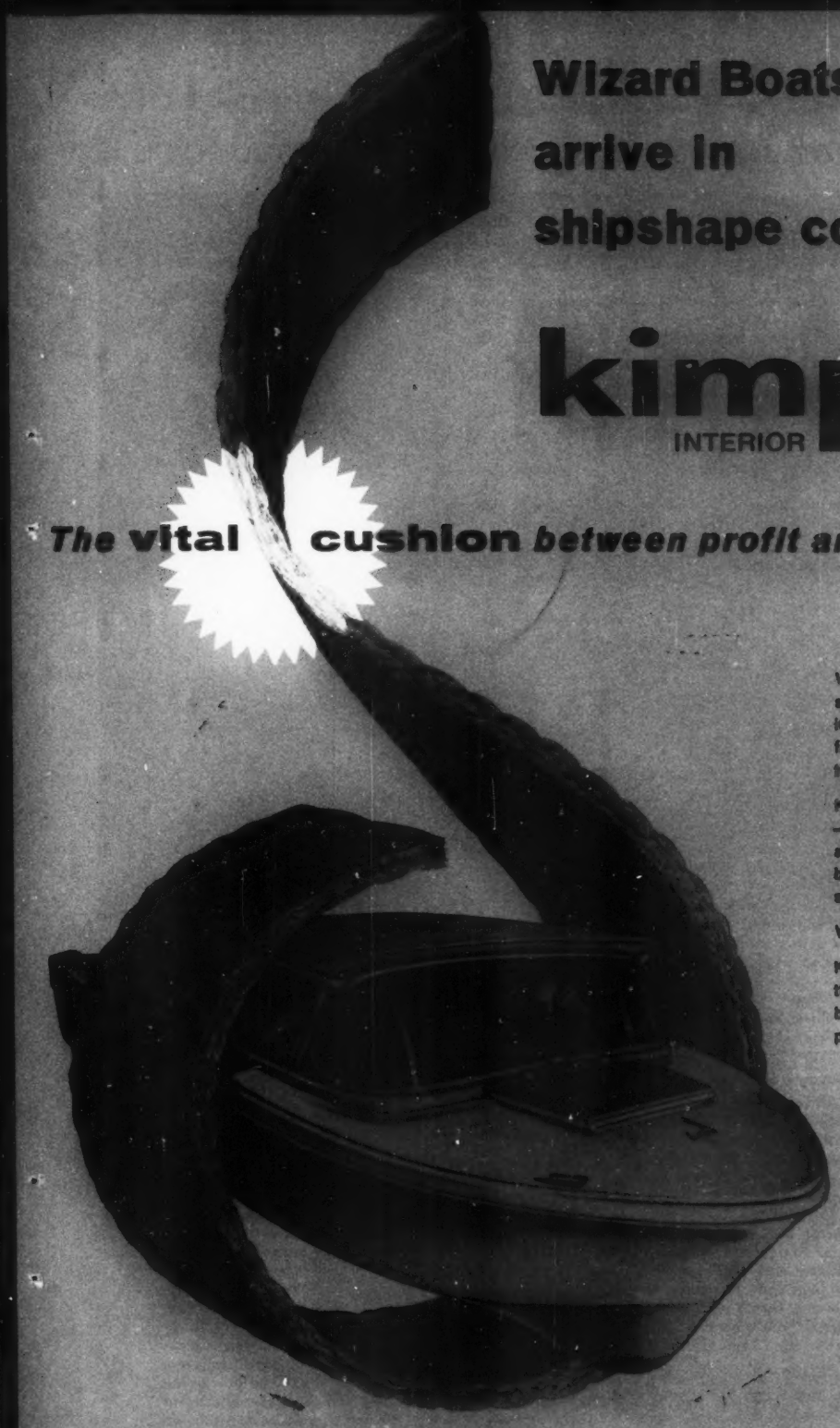
Freight savings for citrus concentrates, for example, will exceed $62.18 per carload when shipped from Orlando, Fla., to Chicago in aluminum cans, more than $55.80 from Orlando to New York City.

Aluminum cans also have a positive effect on the customer's attention. Designs using transparent inks let aluminum's luster catch the eye. This gives you a brighter, stronger selling can. And even more money can be saved, greater sales impact achieved, with new designs that eliminate the base coat or print.

Make it a point to think about putting your product in the kind of can that saves and sells . . . an aluminum can. Get in touch with Alcoa . . . the world's leader in aluminum . . . the company that puts its experience to work for you. Alcoa . . . Aluminum Company of America.

ALCOA AND AMERICA'S CAN MANUFACTURERS . . . PARTNERS FOR BETTER PACKAGING

Hillfrop
Bohack
DAITCH
LILY OF THE VALLEY
Orchard Fresh
Sonny Boy
FLORIDA SIP
TOP FROST
Hi-Acres
orange
TreeSweet
FROZEN CONCENTRATED
ORANGE JUICE
IGA
MARSH
YOUR BRAND
ALCOA ALUMINUM
BETTER PACKAGING
NOW WITH SUPER STRENGTH



Wizard Boats arrive in shipshape condition

kimpak

INTERIOR PACKAGING

The vital cushion between profit and loss!

Wizard Boats are seaworthy—built to withstand foul weather and rough seas. But it's the bucketing of overland trips—from factory to dealer—that calls for the protection of KIMPAK interior packaging.

KIMPAK protects highly polished surfaces—hulls and decks—from scratches, nicks and dents. Soaks up shocks that cause breakage. And KIMPAK is clean, light, supple—easy to work with!

What can we protect for you?

KIMPAK is stocked for immediate delivery throughout the United States and Canada by leading coarse paper merchants and packaging supply firms.

Kimberly-Clark PRODUCTS

FREE! trial supply of KIMPAK

DEPT. MP-5, KIMBERLY-CLARK CORPORATION • NEENAH, WISCONSIN

Our product is _____

Please send us a FREE trial supply of KIMPAK for test shipment.

Name _____

Firm _____

Address _____

City _____ Zone ____ State _____

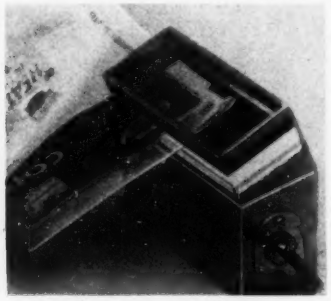
EQUIPMENT & MATERIALS

[*Continued from page 52*]

bottled hand lotions, sun-tan oil and other liquid or semi-viscous products that are applied in small amounts. Molded of high-density polyethylene, the threaded closure is available in 20- and 24-mm. size and is said to fit all standard plastic containers. The closure is of two-piece construction: a flat-topped cap with a molded-in recess and a swiveling dispenser nozzle. In closed position, the nozzle lies flat in the recess and the product cannot be accidentally discharged. A flick of the thumb brings the nozzle into upright position and opens up a channel through which the product flows. Nozzle-orifice size can range from $\frac{1}{32}$ to $\frac{1}{8}$ in. to accommodate products of varying viscosity. Known as Turret Seal CT, the dispensing closure can be supplied in any standard color or in two-color combination. The flat top surface facilitates price marking. *U. S. Cap & Closure Co., 77 Washington St., Chicago 2.*

Instrument to check heat-seal quality

Du Pont's Technical Service Laboratories has developed a device that permits visual inspection of heat-seal quality in transparent packaging films by polarized light. Known as the Heat - Seal - O - Scope, the portable instrument is produced by Precision Machine & Development Co. It operates on a simple color-detection principle. Looking at a heat seal through the viewer, the user sees a display of color which, by zones of shading or difference, indicates the uniformity of welding in the seal. The array of color is produced by polarized light. If the film package was sealed with sufficient heat, the color is uniform all along the seal line. If not, areas of non-uniformity show up in different colors or shades and thus pinpoint potential trouble spots. *Precision Machine & Development Co., New Castle, Del.*



Packaging system for one-way containers

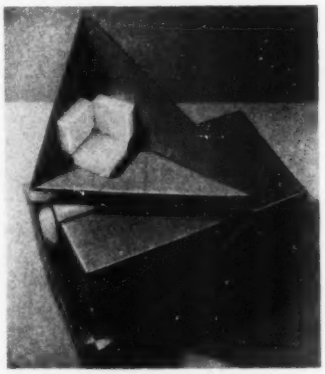
A new six-pack carry carton and companion packaging machine, designed for cans or one-way bottles, is offered to beverage packagers by Olin Mathieson's Packaging Div. The band-style carton, called Syncropak, is of one-piece construction with partitions which fit between the containers to protect them from handling damage. It also is reported to offer ease of opening. The machine, called Syncropaker, reportedly packages cans or bottles into the new carton at high speeds in a single, straight-line operation requiring one operator. It is available with bottle or can attachments, or both. Change-over from one container style to the other is said to take 15 minutes. Distribution of the machine is being coordinated from Olin's carton headquarters at West Monroe, La. *Olin Mathieson Chemical Corp., 460 Park Ave., New York 22.*

Laminated-foil label stock

Coated Products has developed a laminated-foil label stock that is reported to duplicate the texture of highly polished aluminum foil. The material, which is an addition to the company's Stixie line of pressure-sensitive products, is smooth to the touch and is printable. Available in both sheets and rolls, the new label stock is offered with either permanent or removable adhesive backing. For details on this material, contact *Coated Products, Inc., Middlesex, N.J.*

Foamed-plastic corner cushioning

Pac-Tron has introduced an expanded-polystyrene corner to protect delicate items during shipment. Called Pac-Trim, the corner consists of three hinged pads 2 by 2 by $\frac{5}{8}$ in., backed with a water - activated adhesive. Once set in place in each of the corners of a shipping carton, the resilient pads reportedly will shockproof any fragile item up to 25 lbs. in weight. Larger-size corners are available for heavier items. The supplier claims that the corners provide an inexpensive way to pack sensitive products for protection against handling damage. The flexible, lightweight material is reported to have an excellent memory characteristic and a slow controlled rate of recovery. Further information is available from *Pac-Tron, Inc., Mystic, Conn.*

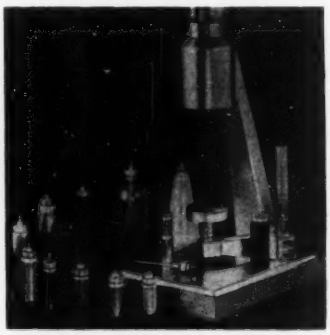


Opaque plastic bag for potatoes

A white-opaque polyethylene bag, reportedly the first available for growers and packers of potatoes, has been introduced by Kordite's produce division. The new bag is manufactured with tubular construction, full white opaque color on front and back and a transparent window. It is vented for air circulation, to protect the potatoes during transportation. The bags, available in 5-, 10- and 25-lb. sizes, permit custom imprinting in up to five colors. The opaqueness permits packaging of washed or unwashed potatoes and is said to reduce product greening through exposure to light. *The Kordite Co., Macedon, N. Y.*

Aerosol-bottle crimper

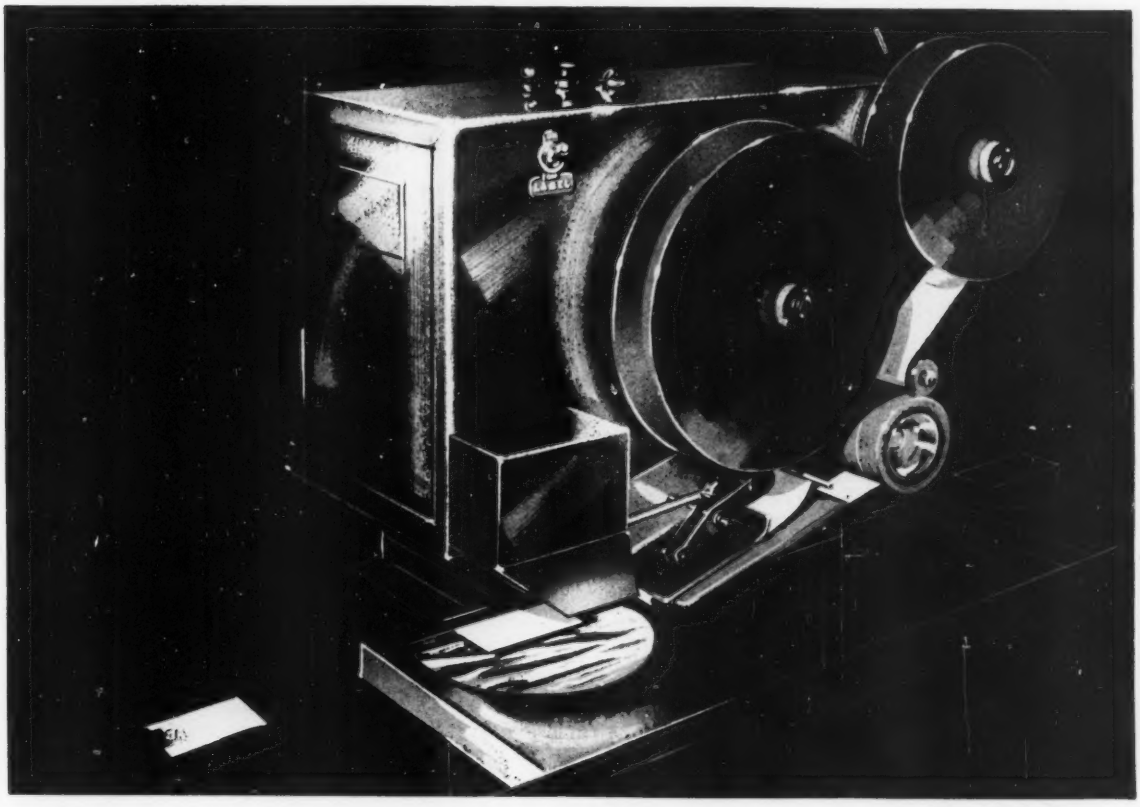
Pressure Pak is marketing an aerosol-bottle and vial crimper which does not use collets for crimping or spinners for valve sealing. Instead, the unit's closing mechanism is operated by 18 finger-like projections called "crimpettes." The new machine, Model 2000-B, is claimed to be capable of crimping all aerosol containers below 1-in. valve diameter. Change-over is said to take less than two minutes, requiring only plunger-stroke adjustment (which governs crimping diameter) and valve-depth adjustment (which regulates crimp height). For further information, contact *Pressure Pak, West Palm Beach, Fla.*



Web conditioner remoisturizes cellophane

A web conditioner which restores moisture to cellophane at speeds of up to 1,000 ft. per minute has been brought out by American Viscose's film division. The supplier

FROM KLEEN-STIK ..... WORLD'S FIRST "JET-ACTION" AUTOMATIC PRESSURE-SENSITIVE LABEL APPLICATOR!



kleen-stik® "LABEL-AIRE"

JET-FAST . . . JET-SMOOTH . . . JET-PERFECT!

Actually picks up and applies labels by "AIR-JET" Action!

1 In-coming air jet picks up label as it peels off backing

2 As package or product trips micro-switch, reverse (outgoing) air jet "shoots" label into exact position

Here's the machine that brings new speed, ease, and economy to pressure-sensitive labeling on the production line. Unlike "conveyor-type" applicators which pull the label from the backing by adhesive tension, the Kleen-Stik "Label-Aire" operates on an entirely new "jet action" principle. Manufactured to highest quality standards . . . thoroughly tested for reliability . . . *guaranteed* by Kleen-Stik.

No Heat - No Water - No Glue - No Hand Operations!

kleen-stik® PRODUCTS, INC.

7300 West Wilson Ave. • Chicago 31, Ill.

Plants in Chicago, Newark, Los Angeles, and Toronto, Canada

- Handles Kleen-Stik Roll Labels from ½" to 3" wide
- Labels any material . . . . any shape of package
- Perfect registration—adjustable to any production line speed
- Compact . . . lightweight . . . easy to use
- Available on lease — no heavy investment

Write for complete details on the new Kleen-Stik "Label-Aire"

OVER 25 YEARS OF PRESSURE-SENSITIVE LEADERSHIP!

B-G 29092

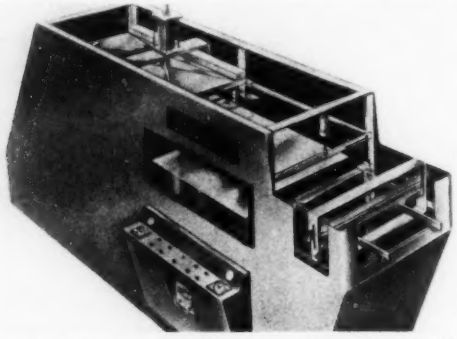
claims that this is double the speed possible with its predecessor model. The web conditioner, designed for installation at the end of the printing press, restores moisture content and film weight to specified levels. (Films with an insufficient amount of moisture may become embrittled and result in excessive waste when used for packaging, the supplier points out.) In addition to rehumidifying film, the conditioner removes wrinkles and reduces any distortion which may have resulted from overdrying or stretching during printing. It also is said to assure better printing by removing residual solvents from the ink, to give better anchorage between inks and films. Film-winding quality is also improved by the new unit, says the supplier. The machine is 66 in. long and 13 in. deep. Width depends on the size of web. *American Viscose Corp., Film Div., 1617 Pennsylvania Blvd., Philadelphia 3.*

New grades of interior wadding

Four new grades of Kimpak, Kimberly-Clark's interior packaging material, are now available. Two of the grades are water resistant. The new creped wadding cushioning material reportedly features improved cushioning performance, uniform surface texture and a wider selection of thicknesses. These grades are: K-21—a bleached, high-cushion material for absorbent or decorative packaging; K-31—an unbleached, general-purpose cushioning; K-41—a low-density, high-cushion, water-resistant material; and K-44—a high-density, heavy-duty, water-resistant grade. The new grades are available in thicknesses ranging from 0.03 to 0.50 in., in sheet or roll form, with a selection of backing papers. *Kimberly-Clark Corp., Neenah, Wis.*

Automatic vacuum former

A new automatic vacuum former that is said to offer the high production requirements for formed plastics in the packaging of food, hardware, instruments and small-parts



products is now available from Tronomatic Machine. Known as the Tronomatic 2436, the former utilizes a two-motion horizontal and vertical heater for pre-heating the plastic and simultaneously moving it through to the forming or drape stage. The heater approaches the plastic to within 2 in. at the forming position and automatically returns to the pre-heat starting position when the plastic material is sufficiently heated. The adjustable clamp frame holding the plastic material can be varied in size (in 1-in. increments) from 12 by 12 in. to 24 by 36 in. Accessory equipment includes an automatic cutter, a temperature controlled table, an automatic unwinder, partial vacuum or air billow timer and controls, and a plug attachment. It can be equipped for skin-package application. *Tronomatic Machine Mfg. Corp., 25 Bruckner Blvd., Bronx 54.*

Rigid, glossy vinyl sheet

Nixon-Baldwin Chemicals is now supplying pilot quantities of a rigid, glossy vinyl sheet (in clear, translucent and opaque colors) which is reported to have many packaging applications. The vinyl sheet will be in mass production in mid-1961. Sheet thicknesses of the extruded vinyl range from 5 to 80 mils and are initially available in sheets or rolls up to 26 in. wide. According to the supplier, the vinyl has excellent formability, is chemically resistant and dimensionally stable, contains no plasticizer, does not support combustion and absorbs no moisture to cause warping. It is reported to have a fast vacuum-forming cycle and excellent heat-sealing characteristics. The material is suggested for "see through" packaging applications requiring strength and rigidity, such as blister packaging, skin packs for heavier items and boxes. *Nixon-Baldwin Chemicals, Inc., Nixon, N. J.*

Vinyl emulsion coatings for paper

Coatings of a water emulsion of polyvinylidene chloride on paper and paperboard are now available from Potlatch Forests that reportedly provide superior packaging barriers to water vapor, gasses, chemicals, fats and oils at a cost that is said to be equal to or better than that of competitive materials. Initially, the coatings will be applied to paperboard for immediate applications in trays and cartons for meat and bakery products. Other applications in packages for cookies, cereals, dehydrates, frozen foods and liquid products are expected to follow. Applied as a very thin coating, the saran-like emulsion is said to withstand scoring and bending without cracking and to provide a scuff-resistant external surface that enhances package appearance. *Potlatch Forests, Inc., Lewiston, Idaho.*

Electrical treating for plastic printing

Electrically produced oxidization—a low-cost method for preparing plastic surfaces for printing, silk screening or labeling—is provided by a new machine developed by Lectro-Treat. The unit bombards plastic with electrical energy, causing the surface to oxidize sufficiently to permit the adhesion of inks and glues. Objects of all sizes, including bottles and vials, can be treated without difficulty at substantially lower costs than for conventional plastic-treating methods, says the supplier. The machine is 6 ft. long, 30 in. wide and 4 ft. high. It can be incorporated into existing conveyor lines and is adjustable to users' production rates, the manufacturer says. *The Lectro-Treat Co., 5020 Easton Ave., St. Louis 13.*

Egg-handling and packaging system

An automatic egg handling and packaging system which unpacks, cleans, mass-candles, sizes, counts, detects blood spots and packages eggs is now being offered by FMC. The system is claimed to provide almost complete automation in the processing and packaging of eggs. The washer-dryer, blood-spot detection and shell-protection cycles are optional. In the packaging operation, eggs are moved to a central packing area by means of cup conveyors. Each egg is dropped into its proper cell in a carton or bulk container. A "memory unit" attachment controls this operation. A cell detector checks the cartons for missing eggs, after which they move to closing machines, date stampers and to a packing table where an operator puts them into shipping cases. *Food Machinery & Chemical Corp., Packing Equipment Div., Riverside, Calif.*

Sterilizable surgical packaging

Arkell & Smiths has entered into large-scale manufacture of sterilizable paper and glassine bags for surgical instruments and dressings. They are available in sizes from 1-by-3 in. for hypodermic needles to large envelopes for drainage dressings. The packages are said to meet the rigid requirements of the medical profession and to withstand a temperature of 240 deg. F. at 100% relative humidity. A tear strip for easy opening is available for many of the dressing packs. Cited features include the use of inks that will change color when exposed to sterilizing conditions. Contact *Arkell & Smiths, Hudson Falls, N. Y.*

Code dater and aerosol crimper

Nalbach Engineering has introduced two new packaging machines—a code dater and an aerosol crimper. The code dater, available in two models—2 S.O.L. and 2 S.I.L.—is

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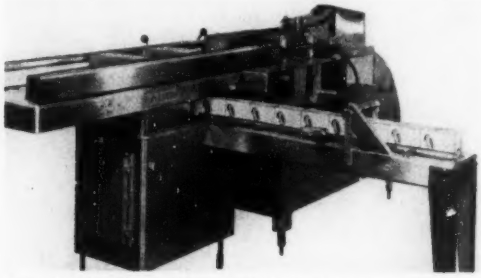
designed to provide a means for product control, inventory control or age control. It is said to handle metal, glass or plastic containers with flat or concave bottoms. The printing wheel is readily removable from the machine for changing type. Vinyl or rubber types are available. The aerosol valve crimper is offered in vacuum or non-vacuum head models with speeds ranging from 50 to 250 cans per minute. It is said to handle can diameters between 1⅜ and 3½ in., in heights between 2½ and 7¾ in. and with valve diameters up to ½ in. and valve heights up to 1⅛ in. Other sizes are available on special order. Among the features the supplier cites are: The crimping heads are mechanically operated; each head is individually mounted for easy removal, and none of the crimping force is exerted on the container. *John R. Nalbach Engineering Co., 6139 W. Ogden Ave., Chicago 50.*

Pressure-sensitive paperboard

Delran is the name given to a paperboard construction containing a spotted area of specially formulated pressure-sensitive adhesive. SH&L, a design firm which developed the material, says it has wide application to many types of promotional and permanent packaging. Bottles, cans, cartons and other containers can be firmly affixed to the adhesive-treated paperboard without the need for die-cut holding devices or other support, says the company. This feature, the developer notes, affords full product visibility and greater display impact. Containers affixed to the material reportedly can be removed easily. According to the company, the adhesive-treated paperboard provides for cost savings through the use of less materials and through higher-speed manual or machine packaging. Additional details are offered by *SH&L, 130 E. 59 St., New York 22.*

Ice-cream-carton accumulator-bundler

A newly redesigned ice-cream-carton accumulator-bundler machine for dairies and ice-cream plants has been introduced by Hayssen. The unit features an enclosed paper



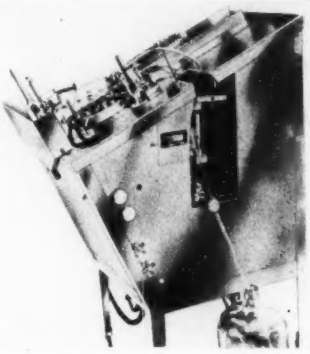
floor stand with auxiliary roll holder which permits mounting of a fresh roll while the machine is in full operation. A simple manual splicing operation allows a single operator to feed the new roll into the machine without interupting production, says the company. The floor stand will handle mill rolls up to 26 in. in diameter. Another improvement cited by the supplier is that the entire top section of the accumulator-bundler has been opened up to facilitate access for cleaning and maintenance. Further details are available from the manufacturer, *Hayssen Mfg. Co., Sheboygan, Wis.*

Thermal-impulse sealing machine

A new bench-model, thermal-impulse sealing machine, model 16T, is available from Weldotron. Designed primarily for polyethylene, the unit reportedly will seal saran, vinyl and most other thermoplastic films as well. The new foot-activated sealer is available in 16-, 24- and 30-in. lengths and is said to produce high-quality seals and tear seals at high speeds. The unit utilizes a rapid heating and cooling action. The company claims that no operator skill is required in running the machine. Additional data are available from *Weldotron Corp., 841 Frelinghuysen Ave., Newark 12.*

Ampoule filler and sealer

A new ampoule filler and sealer, designated Model 50, is being supplied by Chase Equipment. The machine can handle difficult ampoules, such as round-bottom or long-neck, the supplier notes. The unit's 45-deg. slope is intended to insure stability of ampoules when they are loaded in bulk and when they are individually fed into the sprocket. Machines can be supplied for solenoid - controlled gravity-flow filling or with syringe mechanization. Controls are outside so that syringe-dose speed and other operations can be varied without stopping the machine. This allows for quicker set-up and change-over, says the supplier. Flushing can be accomplished either before or after fill. The machine's filling speed varies according to the size of ampoule to be filled (1-cc. ampoules reportedly can be filled at a rate of 45 per minute). *Chase Equipment Co., Div. C. W. Logeman Co., 633 Bergen St., Brooklyn 38.*



Magnetic take-off can diverter

Peco has made available a magnetic take-off can diverter which automatically directs cans from a main line into branch lines as needed. The diverter operates with an electromagnetic revolving wheel which becomes magnetized when a line needs cans and demagnetizes itself when the branch line is full. The cans are said to be firmly held in a stable position during the turning operation so as to avoid tipping, instability and jams. According to the supplier, the magnetic diverter insures that no line can be overloaded while others are losing production because cans are needed. Can manufacturers reportedly can use the diverter to keep flangers, beaders, testers and seamers operating at maximum rates and to avoid transient down time caused by temporary lapses in can supply. *Peco Corp., Mountain View, Calif.*

Coating for paperboard and film

Interchemical Corp. has developed a vinylidene-chloride coating for paperboard and flexible-film packages that is reported to offer such characteristics as low water-vapor transmission and excellent resistance to oils, fats, lactic acid and food stains. The latex-type coating, called Vylan, readily wets and adheres to such substrates as paperboard, polyester, glassine and cellulose acetate. It also can be used as its own primer, thereby assuring freedom from pinholing, says the supplier. The heat-sealable or gluable material reportedly can be scored and creased with virtually no effect on its WVTR and grease resistance. *Interchemical Corp., Finishes Div., 224 McWhorter St., Newark 5.*

Line of wooden boxes

J. H. Dunning Corp. offers a line of solid wooden boxes which it says can be made in any size, with recessed areas designed to fit any shape of product. The interior of the box can be padded or flocked in a choice of 34 colors, for further protection or more attractive appearance. Also available are a wide range of exterior textures, woods and corners and joints. Names, trademarks, specifications and other data can be applied directly to the box surface by silk screening, decal, hot stamping, printing or gummed labels. For details, contact *J. H. Dunning Corp., Darien, Conn.*

New blister-packaging machine

Frank R. Ferris Co. introduces a medium-speed production model of its Orbit Plastic-Pak blister-packaging machine. The new semi-automatic vacuum former is designed for use

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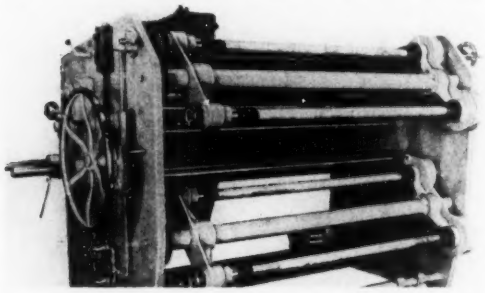
in skin packaging, bubble packaging and the production of a variety of vacuum-formed products. The roll-fed machine has a mold area of 14 by 20 in. and is said to handle all plastic films as well as coated and uncoated backing board. The unit is reported to be low in initial cost and to offer ease of maintenance. Details may be had from *Frank R. Ferris Co., 4026 N. Figueroa St., Los Angeles 65.*

Duplex turret-type slitter-rewinder

Appleton Machine's Doven Div. has introduced a duplex turret-type slitter-rewinder which is said to be adapted for score cutting and is equipped with a power nip roll



for pulling the material from the parent unwind roll. An automatic footage meter stops the variable-speed machine at predetermined lengths. The new machine can accommodate film and paper stock ranging up to 0.07 in. thick, in width ranges from 36 to 72 in. Rewind shafts range from 1½ to 3 in. in diameter. Automatic core pressure can be incorporated on all four mandrels as optional equipment. *Doven Div., Appleton Machine Co., Appleton, Wis.*

New coated paperboard

Packaging Corp. of America is marketing a new coated paperboard called "North Brite Blended." It is reported to combine light weight with rigidity and to be ideally suited to the merchandising requirements of pharmaceutical firms, food processors and a wide range of other carton users. The company also claims that the new paperboard offers a fine printing surface and is especially useful where purity of raw materials is essential—in food packaging, for example. It is available in thicknesses ranging from 0.01 to 0.24 in. *Packaging Corp. of America, Evanston, Ill.*

Seamless aluminum bottles in stock sizes

Seamless aluminum bottles are now available in 28 stock sizes from American Aluminum, for use in packaging, shipping and storing of chemicals, minerals and foods. The bottles can accept cork or threaded closures as desired by users. Among the features cited for the seamless aluminum bottles are: elimination of product loss due to breakage, protection for light-sensitive materials, safer handling, lower shipping costs and maintenance of rigidity. For further details contact *American Aluminum Co., Mountainside, N.J.*

Low-cost electronic heat sealer

Sealomatic Electronics Corp. introduces an electronic heat sealer which is reported to offer many advantages at low initial cost. Known as Model 300-SP20, the new sealer utilizes a twin "V" ram construction and features a 16-by-24-in. bed plate and a 10-by-12-in. upper plate. The sealer has a floating control circuit and a front control instrument panel. *Sealomatic Electronics Corp., Scott Ave. & Randolph St., Brooklyn.*

Time-saving carton-sealing tape

A new pressure-sensitive carton-sealing tape that utilizes an adhesive which reportedly has a great affinity for the cellulose fibres in shipping cartons has been introduced by Mystik Adhesives. Known as Mystik Brand No. 6376, the tape was designed to meet the requirements of government specification PPP-T-76 for overseas shipment. The tape is said to provide a quick tack with high holding power. It has a strong paper backing reinforced with rope fibres that make it suitable for sealing fibreboard containers that must withstand rough handling and resist weather and wear, the supplier says. For details, contact *Mystik Adhesive Products, Inc., 2635 N. Kildare Ave., Chicago 39.*

Cylindrical plastic vials

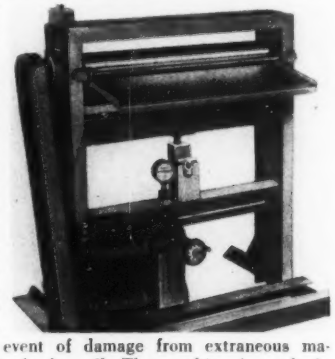
For those who pack small parts in limited quantities or for sampling, Celluplastics has made available a line of cylindrical plastic vials complete with friction-fit plastic closures. Called Handy Paks, the vials are packed 100 per carton and come in 10 different sizes, ranging from ½ in. by $1\frac{5}{16}$ in. to ½ in. by $3\frac{5}{8}$ in. Complete details are available upon request to the container supplier. *Celluplastics, Inc., 24 Commerce St., Newark 2.*

Produce packaging in polyethylene

Chase Bag offers a new 50-lb. wet-pack produce bag and a new line of printed polyethylene bags designed to add sales appeal to in-store produce packaging. The bulk bag consists of paper-yarn fabric laminated to an inner sheet of perforated polyethylene. Specifically designed as a bulk shipper and storage container for carrots, the open-mesh bag is offered with or without drawstring closure. During top-ice shipment, the perforations in the polyethylene liner allow cold water to flow into the bag and circulate around the contents. The holes are spaced wide enough to prevent produce wilting during refrigerator storage. The in-store polyethylene bags also are perforated for ventilation. On large orders, exceeding 25,000, the customer's name can be pre-printed on the bags together with a stock design. *Chase Bag Co., 355 Lexington Ave., New York 17.*

Perforating machine for skin packaging

A perforating machine that will produce many minute holes in coated kraft, corrugated board and similar materials — reportedly allowing the maximum amount of air to pass through during the vacuum operations required in skin packaging—has been made available by Robert A. Main & Sons. The tiny holes are said to produce a neater package. The unit's needle points are replaceable in the event of damage from extraneous material passing through the roll. The machine is made in standard roll widths of 33, 48 and 60 in., with pin patterns of ⅛, $\frac{3}{16}$ and ¼ in. square. Optional equipment includes motor and variable-speed drive. Details are available from *Robert L. Main & Sons, Wyckoff, N. J.*



Fast-action blow-molding machine

Exceptional versatility and extremely high production are among the features claimed by Auto-Blow for its new "Meter-Master" line of blow-molding machines. They are reported to combine fast-action toggle presses with high pressure hydraulic accumulators and are available in 2-, 4-, and 8-station models for molding products up to 8 in. in diameter. The new machine can simultaneously mold different items. Simplified controls and safety devices are located at all operating stations. The new machine uses a true plastic accumulator actuated by a hydraulic device that provides constant high pressure without a pump, says the supplier. The accumulators are self-purging for fast color changes. Rapid parison extrusion is said to impart several

to look "Better than Good" Foremost uses new ice cream carton made of TEXCOTE

New Saf-T-Seal Carton by Edwin J. Schoettle Company, Inc., is America's first fully sealed reclosable ice cream carton. Schoettle likes the way TEXCOTE stands up in this difficult service; says the carton is "100% leakproof—it actually holds water."

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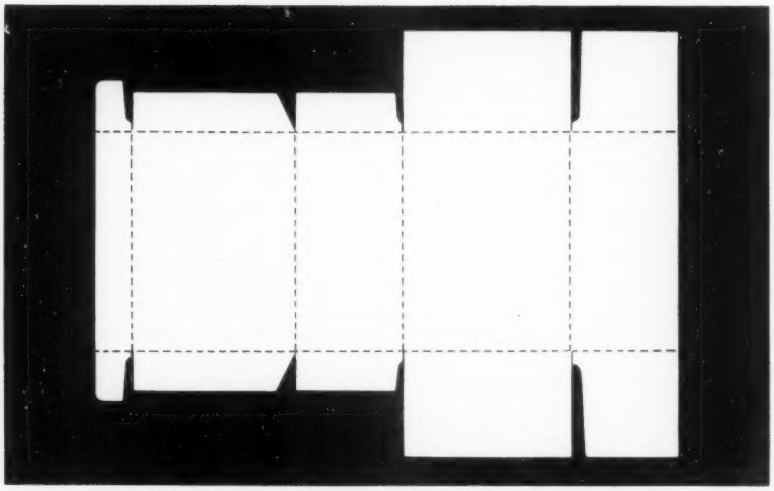

Why TEXCOTE makes a better package

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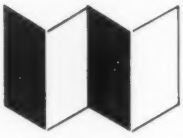

GOOD FOLDING

TEXCOTE has extremely good folding qualities. And its high strength keeps folded edges crisp.

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benefits, including: more uniform temperature throughout the parison, extrusion at a lower temperature than possible with slower units, improved surface finish and a reduced open mold time to increase production from each mold. Contact *Auto-Blow Corp., Fairfield, Conn.*

High-speed automatic labeler

The new Tuck Labeler applies pressure-sensitive labels at high speed and with extreme accuracy to any type of surface, reports the machine's supplier, Technical Tape. The unit weighs about 30 lbs. and occupies one cubic foot of space. According to the manufacturer, it will label surfaces which are hard or soft, concave or convex, or deeply recessed, with a precision of plus or minus 0.01 in. Labeling speeds of up to 480 applications per minute are reported for the machine, which can be mounted in any position, including upside down and horizontal. It handles a variety of label materials, including foil and thin films. The unit can be adapted in less than five minutes to handle any size or shape of label up to 3 in. square, says the company. A printing attachment is available which will print price data or four lines of type on the labels as they are applied. The printer operates without liquid ink. Labels are applied by means of a self-adjusting plunger which picks a label from the roll, then reaches out and fastens it to the desired surface. Up to 15,000 labels can be applied from one load. *Technical Tape Corp., New Rochelle, N.Y.*

Polystyrene aerosol overcap

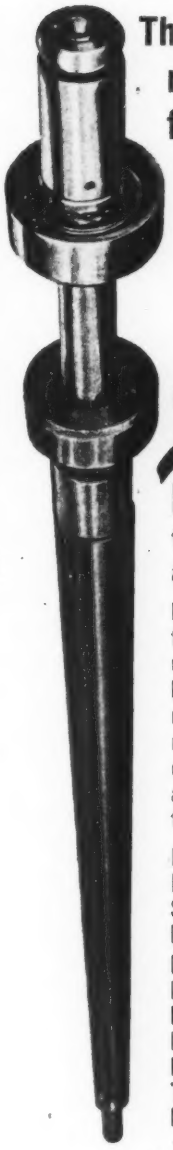
Engineered for use on the 16-oz. aerosol can is Sunbeam Plastics' new Jumbo molded-polystyrene overcap. The cap has a locking feature common to other styles in the supplier's line. It has a raised "price-marking area" on its flat top that also provides additional clearance for high valves. This raised center section is built into the mold as a removable insert, making possible the creation of individualized caps with product or brand identification embossed in the area at a cost reported to be far less than that of a complete mold. The cap is externally top center gated for uniform thickness and strength. Stocked in black and white, the new cap also is available in a wide variety of colors. *Sunbeam Plastics Corp., Evansville, Ind.*

New injection-molding unit

Newbury Industries introduces a newly designed automatic plastic injection-molding machine, the Model 80 Imperial Mini-jector. It features increased molding capacity (up to 2 oz. of polystyrene) and plasticizing capacity of 25 to 35 lbs. per hour. Standard mold size is 9⅞ by 8 in.; maximum mold size is 11 by 8 in. Dry cycle time is 5 seconds without packing stroke and 7 seconds with packing stroke. Clamping pressure, says the supplier, is approximately 42 tons. Clamp stroke is adjustable. The new machine, which has two-zone cylinder heat control, features interchangeable cylinders which reportedly offer improved flexibility and rapid mold removal or replacement. Optional equipment includes nylon nozzles and mold chilling and heating systems. *Newbury Industries, Inc., Newbury, O.*

Compact film-bag sealer

A compact, automatic machine that reportedly seals 2,000 loaded polyethylene bags per hour is offered by American Engineering & Design Co. Called Seal-A-Bag Automatic, the machine is said to eliminate the high cost of multiple operators using conventional manual or automatic sealers, and to reduce the number of product-handling operations in the bagging/sealing process. It will seal bags from 1 to 14 in. wide and up to 18 in. long, the supplier notes, and produces a fine beaded seal which is adjustable in strength from "easy-open" to "tight-weld." Scrap material is trimmed and blown away as the bag is sealed. The machine is about 3 ft. high and is said to take up no more space than a filing cabinet. For further details, contact *American Engineering & Design Corp., New London, Conn.*



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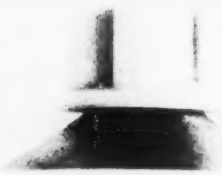

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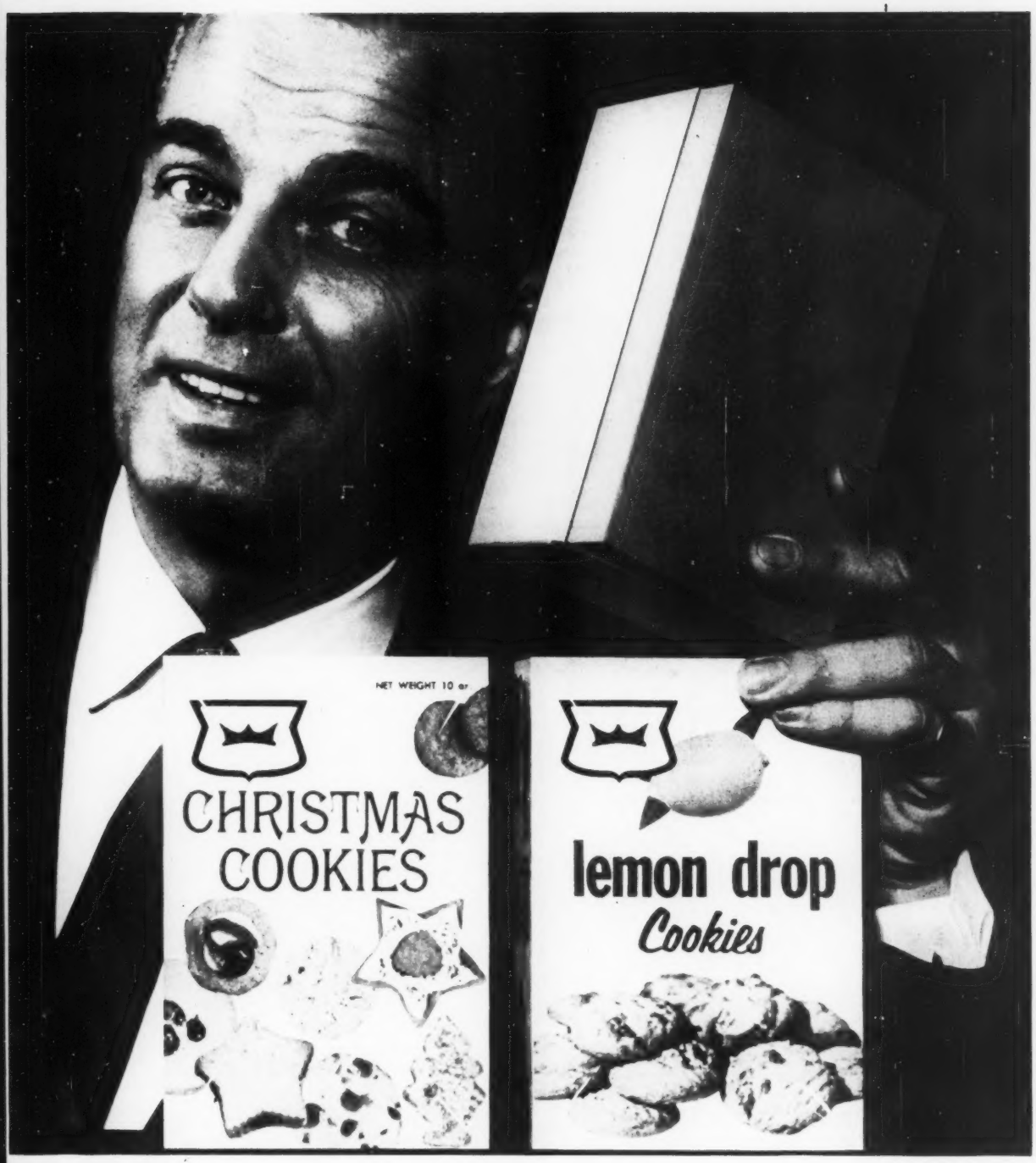

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FOR YOUR INFORMATION

The National Bureau of Standards, **U. S. Dept. of Commerce,** has made available a manual entitled "Checking Prepackaged Commodities." The pocket-size handbook is designed primarily for weights and measures officials, but USDC reports that it will also be useful to persons in commercial and industrial establishments involved in the packing, distributing and retailing of packaged commodities. The 27-page booklet, which includes a six-page price-computation table, is available at 35 cents per copy from the Supt. of Documents U. S. Government Printing Office, Washington 25, D. C.

At the annual business meeting of the **Technical Assn. of the Pulp & Paper Industry,** held during its 46th annual meeting in New York, new officers were elected. **Harold M. Annis,** Oxford Paper Co., was elected pres. He succeeds **James R. Lientz. Dr. John C. Wollwage,** Kimberly-Clark, was elected v.p. **William H. Aiken,** Union Bag - Camp Paper Corp., **Paul W. Bartholomew,** Minnesota & Ontario Paper Co., **Glenn C. Kimble,** Union Bag, and **W. P. Lawrence,** Champion Paper Corp., all were elected to the executive committee for three-year terms. The TAPPI medal for outstanding contributions to the technical development of the pulp and paper industry was presented this year to **G. H. Chidester,** Chief of the Forest Products Laboratory (U. S. Forest Service), div. of pulp and paper. He has been with the laboratory since 1925.

Annis

"Creative Packaging of Consumer Goods" is the title of a short course to be given by the University Extension, **University of California,** Los Angeles. The course, which will be held May 14-19 at the Lake Arrowhead Conference Center, Arrowhead, Calif., costs $250. Guest lecturers will discuss many phases of packaging with the aim of providing "a detailed aid to the use of proved techniques in the development of successful consumer packages." Information and registration forms are available from Department K, University Extension, University of California, Los Angeles 24.

At its recent annual meeting, held in New York at the Waldorf-Astoria, **The Can Mfrs. Institute** elected new officers. **Reuben L. Perin,** Continental Can Co., was elected pres. to succeed **Roger F. Hepenstal,** American Can Co. **Ralph Rosecrance,** J. L. Clark Mfg. Co., was elected v.p. CMI reports that metal-can shipments in 1960 were the second highest on record and 3% below the peak year, 1959. Shipments will rise 4% or more in 1961 from last year, CMI forecasts.

A new standards board to supervise the growing standards program in the packaging and materials-handling field has been authorized by the Standards Council of **American Standards Assn.** The new board, to be known as the **Package & Handling Standards Board (PHSB),** will be primarily responsible for ASA projects in such fields as pallets, metal drums and pails, motor-oil cans, conveyor terms and definitions, freight containers, shipping cases for petroleum containers and loading platforms at terminals and warehouses.

A 200-page illustrated text on self-service meat merchandising is available from **The Kordite Co.,** Macedon, N. Y. Kordite notes that meat sales at the retail level are now almost wholly self-service, requiring new cutting, selling and packaging techniques. The text includes layouts for self-service operation, processing and packaging ideas, seasonal and holiday merchandising ideas and data on meat-product performance in the modern supermarket. The book is available through Kordite distributors or sales representatives.

Natalie Samuels has joined the staff of **Packaging Institute** as technical editor. She will be responsible for *The Packet,* PI's monthly newsletter, as well as for technical bulletins, reports and public relations. PI has also established four national operating regions, designed for increased flexibility and efficiency of operations. The new regions, and the coordinator for each, are: West Coast (region 1) C. **Paul Bolton,** Carnation Research Laboratories; Midwest (region 2) **Carl B. Burnside,** Eli Lilly & Co.; East (region 3) **Thomas M. Glynn,** Breck, Inc., and South (region 4) **Thomas S. Lucas,** Coca-Cola.

Samuels

A new directory service to keep abreast of official changes concerning food and color additives is now available to industrial, governmental and educational organizations. It is the joint work of **Information for Industry** and **Hazleton Laboratories.** To be called *Food & Color Additives Directory,* it will consist of five volumes and will include listings for about 3,000 chemicals. It will be bound in loose-leaf fashion so that revised pages may be added and the volumes kept up to date. Subscription prices are $150 for the directory set and $150 a year for the monthly revision service. For more detailed information, contact Information For Industry, Inc., 1000 Connecticut Ave. N.W., Washington 5, D. C.

Packaging '61, the national conference sponsored by the **Packaging Assn. of Canada,** was held in Toronto, Mar. 7-8, at the King Edward Sheraton Hotel. A wide range of topics—from marketing to bulk packaging—were discussed at the various sessions.

The 14th semi-annual meeting of the **National Wooden Pallet Mfrs. Assn.** was held at Litchfield Park, Ariz., Feb. 13. At the meeting, NWPMA reported that 1960 sales in the industry were approximately $162,811,000—an 8.8% increase over 1959.

Documents Index, Arlington, Va., has published a revised and enlarged *Guide*

[*Continued on page 178*]

Events

May 2-4—**Lithographers & Printers National Assn.,** 56th Annual Convention, Arizona-Biltmore Hotel, Phoenix, Ariz.

May 2-9—**Macropak 1961,** international packaging and materials-handling exhibition, Amsterdam, Netherlands.

May 4-7—**National Paper Box Mfrs. Assn.,** annual meeting, Mayflower Hotel, Washington, D. C.

May 7-10—**Super Market Institute,** 24th annual convention, McCormick Place, Chicago.

May 7-11—**Institute of Food Technologists,** 21st annual convention, Statler-Hilton, New York.

May 12-13—**Michigan State University Packaging Society,** third annual packaging exposition, School of Packaging, East Lansing, Mich.

May 14-16—**National Fibre Can & Tube Assn.,** 28th annual meeting, Francis Marion Hotel, Charleston, S. C.

May 15-17—**Chemical Specialties Mfrs. Assn.,** 47th mid-year meeting, Drake Hotel, Chicago.

May 22-24—**American Management Assn.,** orientation seminar on package marketing research, Astor Hotel, New York.

June 5-7 — **American Management Assn.,** orientation seminar, paper, boxboard and corrugated packaging, Astor Hotel, New York.

June 5-9—**Society of the Plastics Industry,** 9th national plastics exhibition and conference, Hotel Commodore and Coliseum, New York.

June 20-29—**IPACK,** international biennial packaging exposition, Fairgrounds, Milan, Italy.

All-white sales appeal... with economy!

The package is

HiYield™ PRINTKOTE

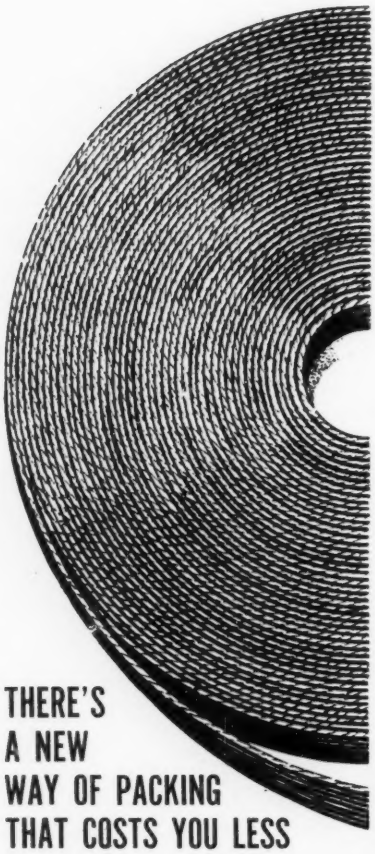
Pure white—inside, outside and all the way through—this attractive, sanitary-looking carton adds sales appeal to famous "*Tootsie Roll Ice Cream Bars.*" It was produced by one of our customers in two-color letterpress on our new economy bleached board—Brite-Pak HiYield Printkote.

Made from 100% virgin bleached fibre, HiYield Printkote contains more square feet per ton than higher density boards, and therefore yields more cartons per ton. While superior in quality, cartons made from HiYield Printkote are *comparable in cost* to many packages manufactured from much lower printing grades of non-virgin fibre boards.

Here is a new, economical bleached board that will add customer appeal where cost is a major consideration and printability a factor.

See how you can *upgrade* your packaging with HiYield Printkote—write Bleached Board Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, New York.

West Virginia Pulp and Paper



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WAY OF PACKING
THAT COSTS YOU LESS

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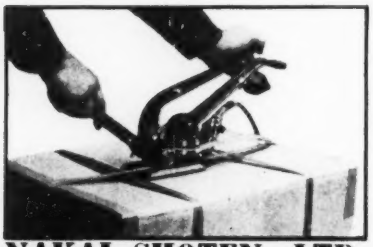
Today, there's a new way of packing, which saves you money in transportation (its light), in injuries (its harmless), in time (its easier to work with), and in composition it doesn't spoil, itself, and therefore doesn't spoil packages. Nakai Shoten Paper Strapping, developed in Japan, means good business to packers and shippers, with its superior strength, economy, safety and speed. Get onto the new way of packing! Get PAPER STRAPPING, from Nakai Shoten!



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F.Y.I.

[*Continued from page 206*]

to U. S. Government Statistics, by **John L. Andriot**. The guide is arranged alphabetically by executive department, with index, subject index and agency index. Of special interest is the Business & Defense Services Administration's *Containers and Packaging Quarterly* and the Bureau of the Census' monthly and annual review of converted flexible-packaging products. Revised biennially, the hard-cover guide sells for $15 (10% discount for cash orders). The publisher reportedly plans to issue a supplemental volume in non-revision years. Orders should be placed with Documents Index, Box 453, Arlington 10, Va.

The winners of the 1960 National Flexible Packaging Competition, sponsored by the **National Flexible Packaging Assn.**, were announced in conjunction with the NFPA annual meeting in Chicago, Mar. 1-3.

The **Packaging Institute** held its first 1961 West Coast technical conferences on "Packaging with Flexible Plastics" on Mar. 8 in San Francisco and Mar. 9 in Los Angeles. The day-long programs included a discussion of how plastics are made, the problems of converting them to end use and the applications for which they are best suited.

McCorison

Guy E. McCorison, Thilmany Pulp & Paper Co., was elected chairman of **Glassine & Greaseproof Mfrs. Assn.** at its 30th annual meeting in New York. **T. Richard Probst**, Deerfield Glassine Co., was elected vice chairman. Mr. McCorison also serves as chairman of the association's exec. committee and has been associated with other paper-industry organizations in executive capacities.

The 13th annual meeting of the **Laminated Foil Mfrs. Assn.** was held at the Yale Club in New York recently. **William Turbeville**, Aluminum Co. of America, was elected pres.; **Walter A. Hunt**, National Foil Co., was named v.p. **O. F. Hamilton, Jr.**, Hamilton Mfg. Co., was named to the exec. committee.

For the eighth successive year, the **Industrial Management Center** will offer its Material Handling Course. To be held June 18-30 at the Lake Placid Club, Essex County, N. Y., the course will combine advanced concepts, new theories, organizational procedures and practical problem solving, reports **James R. Bright**, IMC director. For additional details, contact Mr. Bright, Director, IMC, Weston 93, Mass.

The Plastics Extrusion Coaters Group (formerly Polyethylene Extrusion Coaters Group) of **Specialty Paper & Board Affiliates** held its annual meeting at the Park Lane Hotel in New York, recently. **John C. Davis**, H. P. Smith Paper Co., was re-elected chairman and **Savage C. Frieze, Jr.**, Lowe Paper Co., vice chairman. Featured at the meeting were talks by: **Dr. Kenneth Morgareidge**, Food & Drug Research Laboratories, on "Polyethylene and the F&DA"; **R. E. Lowey**, Hale & Kullgren, Inc., on extrusion-coating equipment and manufacture; **A. J. Felton**, The Black-Clawson Co., and **Charles A. Southwick Jr.**, Technical Editor, MODERN PACKAGING, on polypropylene.

New York's Waldorf-Astoria Hotel was the scene of the annual meeting of the **Kraft Paper Assn.**, at which **R. A. Nash** of Sorg Paper Co. was elected pres. **J. C. Hair**, Crossett Paper Mills, Crossett, Ark., was elected v.p. Guest speaker at the meeting was **William R. Adams**, pres., St. Regis Paper Co., who spoke on "Our Industry Position Today," in which he reviewed the development of today's plant for kraft-paper production and the problems caused by over-capacity.

The Packaging Industry Subcommittee of the **American Institute of Electrical Engineers** will hold its first annual Packaging Industry Technical Conference at Swampscott, Mass., May 15-16. Greater operating efficiency and reduced maintenance costs connected with packaging equipment are the aims of the conference, which will be attended by electrical engineers, packaging personnel from electrical-equipment firms, packaging-machinery producers and users of packaging equipment.

At the **Sulphite Paper Mfrs. Assn.**'s 29th annual meeting in New York, **A. P. Mitchell** was re-elected chairman and **L. W. Gould**, vice chairman. Mr. Mitchell is senior v.p. and director of mktg. for Riegel Paper Corp. Mr. Gould is asst. v.p. and Eastern Div. mgr. of Crown Zellerbach Corp.

Injection Molders Supply Co. has issued its 1961 plant-equipment catalog for the injection-molding industry. The company claims that this is the only completely priced industrial handbook in the industry. It includes items which are standard stock and which are available for immediate delivery. The ring-bound catalog is available without cost upon letterhead request to Injection Molders Supply Co., 17601 S. Miles Rd., Cleveland 28.

"New Frontiers for Company Management" was the theme of the 56th annual convention of the **Lithographers & Printers National Assn.**, held at Phoenix, Ariz., April 30-May 5. Announcement of the winners of the 1961 LPNA Lithographic Competition were announced at an awards dinner on May 2. Panels of the winning entries were shown throughout the convention.

The **Lithographic Technical Foundation** has published two new textbooks. *Halftone Photography for Offset Lithography* has been rewritten and succeeds an earlier edition. It is illustrated with photographs and diagrams, with text by Erwin Jaffe. The cost is $6. The second volume, *What the Lithographer Should Know About Ink*, is a technical bulletin

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KINGS MEN TEST-MARKETED, THEN CHOSE LUSTERBOARD

Kings Men test-marketed its after-shave lotion in LusterBoard packaging to see if it would spark sales. And the LusterBoard package really came through — did the job royally! Now more people are buying Kings Men than ever before. It's easy to see why. Just look how beautifully color and metallic ink reproduce on LusterBoard. LusterBoard plays a part in many successful sales stories. Here are some of the reasons why:

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MID-STATES® fast, trouble-free STITCHING WIRE

Boxes and shipping containers of fibre or corrugated materials can be stitched or stapled faster, more dependably with free-flowing Mid-States Stitching Wire. Never clogs stitching head because it has no raw edges; never flakes. Comes in 5, 10, 25 and 50-lb. coils.

Furnished flat and shaped in all standard sizes (special sizes available), with galvanized or coppered finish.

5-lb. Spools
Packed 10 Spools per carton.

10-lb. Spools
Packed 6 spools per carton.

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Packed 4 spools per carton.

50-lb. Spools
Packed 20 spools per pallet.

STITCHING MACHINES in a variety of models also available from Mid-States. Head sizes range from 12 to 36 in.; capacities up to 375-point (⅜") board; with Electric Solenoid Trip if desired. Lease or sale agreements available.

ROUND STEEL STRAPPING and MACHINES

For binding and reinforcing bales, bundles or boxes.

Strapping in wide variety of gauges, galvanized or coppered, in quantities from 5 to 500 pounds.

Machines on lease or sale agreements.

WRITE today for further details, catalog sheets, samples and prices.

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F.Y.I. [*Continued*]

containing information about lithographic inks reportedly never before available in book form. Its cost is $5. Contact LTF, 131 E. 39 St., New York.

At the third annual convention of the **Flexographic Technical Assn.**, **Kenneth L. Pike**, International Paper Co., was elected pres., succeeding **Karl Weik** of Cello-Foil Products.

The **Spanish Packaging Institute** will sponsor a packaging exhibition, to be held June 1-20, at Barcelona. Detailed information may be obtained from the Institute, Breton De Los Herreros, 67, Madrid 3, Spain.

The **Joint Military Packaging Training Center**, Toledo, offers packaging courses of one- and two-weeks duration for industry personnel. They cover various packaging topics and are intended as well for selected military personnel and civilian government employees. Requests for information should be addressed to Rossford Ordnance Depot, Attn: ORWD-JMPTC, Toledo 1, O.

Merchandising Vision, published by **British Cellophane, Ltd.**, as a quarterly since 1955, is now a monthly. It is reportedly the first monthly publication of its kind to be put out by a British packaging concern. The magazine is edited, written and designed by BCL's sales-prom. staff and is mailed free of charge to interested organizations throughout the world. Address inquiries to Sales Promotion Dept., BCL, Henrietta House, 9 Henrietta Pl., London, W 1, England.

Two new members have been appointed to the Committee on Subsistence Packaging of the **National Academy of Sciences-National Research Council**. They are: **Karl E. Prindle**, Dobeckmun Co., who will be concerned with paperboard cartons and plastic sheetings, and **Allan J. Thompson**, E. I. du Pont de Nemours & Co., who will advise on the development of packaging film.

The growing uses of plastics in consumer and industrial packaging are described in a new booklet issued by **Eastman Chemical Products**. The booklet's title is "Packaging—Last Step in Manufacture, First Step in Sales" and is the fourth in a series of *Tenite Plastics Views*. Copies may be obtained on request to Plastics Div., Eastman Chemical Products, Kingsport, Tenn.

Domestic shipments of glass containers reached an all-time high in 1960, according to **R. L. Cheney** of the **Glass Container Mfrs. Institute**. The GCMI figures show that 1960 shipments totaled 20.3 billion, a 2.5% increase over 1959. The acceptance of lightweight, nonreturnable bottles was a major factor in this increase, says GCMI.

Winthrop Endicott, Carolina Div., Riegel Paper Corp., has been elected a director of **National Paperboard Assn.**

Why packagers of 22-million window boxes all agree . . .

ACETATE'S FOR THE BERRIES!

Again this year a bumper crop of juicy cranberries has reached the nation's kitchens safe and fresh in window boxes of acetate. Sparkling-clear, strong windows of Celanese Acetate allow buyers to see the color, and quality of the berries, yet keeps them clean, bruise-free and fresh. For acetate is the "breathing-wrap" that dissipates mold-producing moisture, prevents fogging. In the home, cranberries can be stored in the freezer for year 'round use. • Window boxes of Celanese Acetate make eye-pleasing displays. They're easy to stack—easy to sell. Because people *like* to buy products in window boxes, they add up to volume sales for you. • Like more information on packaging with acetate? Please write, outlining your application, to: Celanese Plastics Company, Dept. 208-E, 744 Broad Street, Newark 2, N. J.

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MATERIALS FOR Celanese MODERN PACKAGING

POLYETHYLENE FILM . . . ACETATE FILM AND SHEETING . . . PLASTIC CONTAINERS

U.S. PATENTS DIGEST

This digest includes each month a brief summary of the more important current patents which are of special interest to all packagers.* Edited by H. A. Levey.

Glass Forming, James W. Giffen (to Corning Glass Works, Corning, N.Y., a corporation of New York). U.S. 2,970,405, Feb. 7. The method of forming a hollow glass article having an opening therein which comprises closing a first opening of a hollow mold having a second opening therein by arranging a sheet of molten glass over said first opening with border portions of the sheet projecting beyond the outer border of said first opening.

Method and Apparatus for Blister Packaging, Howard A. Rohdin, Glen Ridge, N.J. U.S. 2,970,414, Feb. 7. A method of packaging comprising: advancing a continuous web of plastic material; forming in said web consecutive rows of blisters; splitting said web into strips of consecutive blisters; severing said strips into rows of individual blisters.

Sealed Carton and Method of Forming, Clarence F. Klein and G. Stuart Secton II (to The Lord Baltimore Press, Inc., New York, a corporation of Maryland). U.S. 2,970,525, Feb. 7. The method of continuously sealing moving wax-impregnated paperboard cartons having a plurality of foldable overlapping end flaps which have their adjoining edges joined together adjacent to their fold lines, which comprises moving said cartons successively past a heating means and heating the end flaps of each moving carton, thereby freeing the paperboard fibers from the wax.

Flange Bending Machine for Unstayed Set-up Box Manufacture, Charles T. Fisher (to Harvey M. Crockett, Willow Grove, Pa.). U.S. 2,970,527, Feb. 7. A box-forming machine comprising means for feeding flat blanks to a box-forming station, plunger means for forming the blanks into a box having a base and side and end flanges.

Shipping and Display Carton, Louis Mayer (to Owens-Illinois Glass Co., Toledo, a corporation of Ohio). U.S. 2,970,685, Feb. 7. In a four-sided carton of the type having front, rear and end walls, a botton and a top formed by flaps hinged to said walls, means for retaining the top flaps of said end walls and said front wall in an open position whereby said carton can be employed as a display container.

Bottled Beverage Carrying Case, Henry C. Kappel and Leo J. Martin (to The Richardson Co., Melrose Park, Ill., a corporation of Ohio). U.S. 2,970,715, Feb. 7. An integrally molded one-piece plastic beverage bottle case comprising four walls each having a straight portion and rounded end portions, said walls integrally connected at said end portions, a bottom, said case having 24 compartments formed by a series of eight independent portions extending at an angle across said case.

Pressure Seal for Pressurized Liquid Containers, Jordan S. Levenson, Los Angeles. U.S. 2,970,722, Feb. 7. A pressure seal for pressurized liquid containers, comprising in combination: a main body portion having an outlet at one end and an inlet at the opposite end provided with engaging means adapted to be removably sealingly engaged with the container.

Manufacture of Collapsible Tubular Container Made of Flexible Materials, Valer Flax, Vic-Fezance, France. U.S. 2,970,723, Feb. 7. A tubular container for fluid substances formed of thermoplastic material, said container at one end being flattened and heat sealed edge, to edge along a straight line to form a reinforcing seam in one plane.

Food Container for Freezing and Heating, Raymond E. Jacke and Clarence F. Manning (to Reynolds Metals Co., Richmond, Va., a corporation of Delaware). U.S. 2,970,735, Feb. 7. In a foodstuff enclosure for frozen foods and the like, an integral open-top aluminum-foil tray having side and end walls, the metal being folded at each corner to form reinforcing, opposed, inwardly directly double wall areas of triangular form at said corners.

Self-Sealing Container, Alvist V. Rice, Falls Church, Va., U.S. 2,970,737, Feb. 7. A container for liquids comprising top, bottom and side walls, said top wall including a dispensing opening and at least one integral, open channel.

Sectioned Container and Blank Therefor, William M. Strange (to John Strange Carton Co., Menasha, Wis., a corporation of Wisconsin) U.S. 2,970,738, Feb. 7. A blank of stiff, foldable, flexible paper board comprising a plurality of score lines dividing said blank into a plurality of panel portions.

Closure for Folding Paperboard Cartons, Orison W. Stone and Laurie H. Campbell (to Continental Can Co., New York, a corporation of New York). U.S. 2,970,741, Feb. 7. A carton construction comprising a tubular body of generally rectangular form having four body panels, a partial end flap extending from each side of each body panel.

Carton, Maurice J. Joseph, Wilbert L. Cox and Clarence F. Klein (to The Lord Baltimore Press, Inc., New York, a corporation of Maryland). U.S. 2,970,743, Feb. 7. An easy-opening tight-sealing top closure for a carton having an inner top flap articulated to one side of the carton, and an outer top flap articulated to the opposite side of the carton and folded over said inner top flap.

Packaging Machine, Kenneth L. Webster, Walter M. Ball and Harold R. Coon, Sr. (to Webwraps, Inc., New Canaan, Conn., a corporation of Delaware). U.S. 2,971,305, Feb. 14. In a packaging apparatus having means for feeding a continuous web of paper at a constant speed and having means for forming laterally spaced pleats therein, the improvement, in combination, of an article-handling mechanism for depositing individual articles in said pleats spaced from each other along said pleats—including a spacing member having a plurality of article pockets arranged in longitudinally spaced ranks.

Wrapping Method and Apparatus and Package Produced Thereby, James F. Hobbins, Philadelphia. U.S. 2,971,308, Feb. 14. An article-wrapping machine comprising a movably mounted open pocket shaped to receive and substantially surround an article being wrapped, loading means located at a loading station along the path of movement of said pocket for inserting said article inward into substantially surrounded relation within said pocket.

Apparatus for Loading Articles into Partitioned Cartons, John J. Miskel and Kazmier Wysocki (to Chas. Pfizer & Co., Inc., Brooklyn, a corporation of Delaware). U.S. 2,971,309, Feb. 14. An apparatus for loading articles into cartons having rows of partitions comprising a loading chute for each row of partitions, conveyor means for advancing said cartons in a substantially straight-line path.

Apparatus for Treatment of Bag Mouths and the Like, Edwin E. Messmer (to Amsco Packaging Machinery, Inc., Long Island City, a corporation of New York). U.S. 2,971,311, Feb. 14. In an apparatus for sealing the mouth of a plastic bag having two opposed side walls, a pair of sealing elements adapted to engage the two walls of the bag mouth between them, means for advancing the bag toward said sealing elements, and means for brushing the walls of the bag mouth away from the body of the bag just prior to the engagement by said sealing elements.

Bag Forming and Inserting Mechanism, Harry E. Engleson and Elmer D. Sramek (to F. B. Redington Co., Chicago, a corporation of Delaware). U.S. 2,971,442, Feb. 14. In a packaging machine having a movable conveyer, apparatus for forming a bag container comprising an elongated rectilinear form having two side faces, a front face and a back face.

Machine for Closing Carton Lids, Charles D. Striplin (to Fibreboard Paper Products Corp., San Francisco, a corporation of Delaware). U.S. 2,971,443, Feb. 14. A machine for closing hinged carton lids which comprises a driven belt to support and advance cartons, a second driven belt disposed over the first belt and inclined at an angle which diminishes in the direction of movement of the cartons to engage and close the lids of the cartons.

Dispensing Container, Crawford G. Allison, Maurice D. Hartman, Jr., and George C. Sparks, Philadelphia. U.S.

[*Continued on page 186*]

*For more detailed information, copies of patents are available from the U. S. Patent Office, Washington 25, D. C., at 25 cents each, payable in currency, money order or certified check. Postage stamps are not acceptable.

CAMPCO

Plastic Sheet and Film

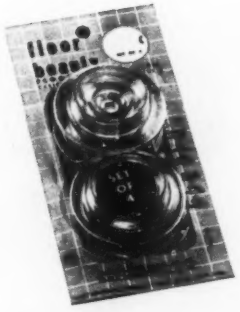
some practical IDEAS for its use in PACKAGING

Skin packs of Campco Butyrate solve pen display problem

Lindy Pen Company of Culver City, California was faced with the problem of providing retailers with a method of displaying their varied line of pens in a way that was neat, attractive and easy to maintain. The solution was found in skin packaging—using Campco Butyrate Plastic Sheet.

Adds Impact To Displays Skin packaging makes possible highly visible, multi-unit displays of Lindy's line of pens and refills—helps to give them a related appearance for added impact at the point of purchase. Important packaging economies also result, since the backing cards are printed with complete sales information, eliminating the need for additional printed inserts.

Triple Protection Lindy found that skin packs using Campco Butyrate offered a number of other significant advantages. For example, the pack protects pens from dust and handling damage. The possibility of pilferage is reduced, too, since Campco Butyrate is very difficult to tear or puncture. Campco Butyrate is also extremely "compatible." Packages using this material can't discolor products made of dissimilar plastic materials.

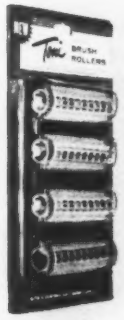


Campco Acetate adds buy appeal to caster cup display

Campco Acetate shows its ability to add eye- and buy-appeal to simple packaging jobs such as these caster cups, manufactured by Ajay Manufacturing Co., Kansas City, Missouri. In addition to making an attractive point-of-purchase display, it also protects the product, keeping it neat and clean, and helps to sell cups in convenient sets.

Crystal Clear Packages A special non-blushing formulation in Campco Acetate enables the material to maintain its crystal clarity—prevents clouding and discoloration. That's why these caster cups show up so well—and sell so well.

"Toni" Brush Rollers kept clean and sanitary with Campco Butyrate



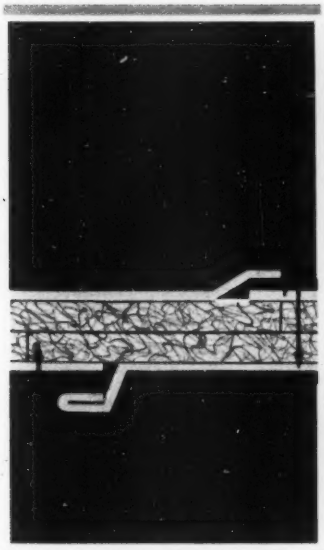
An important consideration in packaging these brush rollers is that they be kept clean, sanitary and undamaged while on display. Campco Butyrate has proven to be an economical means of solving this problem—offering, in addition, the benefits of highly visible product display.

No Shattering or Cracking Campco Butyrate is extremely strong and pliable. It can be deep formed, patterned and hole punched without shattering or cracking. Available crystal clear and in a variety of colors—rolls and sheets in thicknesses .005" to .125"—stock or custom size. Package illustrated produced by Mankato Paper Box Co., Mankato, Minnesota.

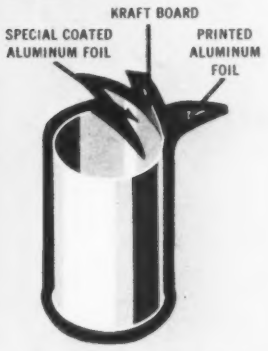
Received Your Campco Packaging Data File? This data-packed reference file on thermo-plastic sheet and film is yours on request—just send name and address on Company letterhead to Campco, 2717 A Normandy Ave., Chicago 35, Illinois.

CAMPCO Sheet and Film, **a Division of Chicago Molded Products Corp.**

NEW
CONCEPT IN
FOIL
CAN
CUTS COSTS



ANY PRODUCT not needing autoclaving or exerting excessive internal pressures can be packed. The can is proved for frozen orange juice concentrate; is being tested and/or considered for motor oil, paints, popcorn, nuts, coffee, chemicals and other products.



NEW CONCEPT IN CONTAINERS DEVELOPED BY ANACONDA ALUMINUM LETS YOU PUT LIQUIDS IN SPIRAL-WOUND FOIL-TO-FIBER CANS. . . .

YOU SAVE ORIGINAL COST. This new can costs 20% less than conventional tin-plated steel in 6-oz. juice can sizes; 14% less in the same size sheet aluminum can with tin plate ends. You get comparable savings over other sizes and styles.

YOU SAVE ON FREIGHT. In the case of the 6-ounce frozen juice concentrate can, weight savings were two to three pounds per 48-can case, depending whether aluminum or tin plate ends were used. Freight savings up to 10% are possible.

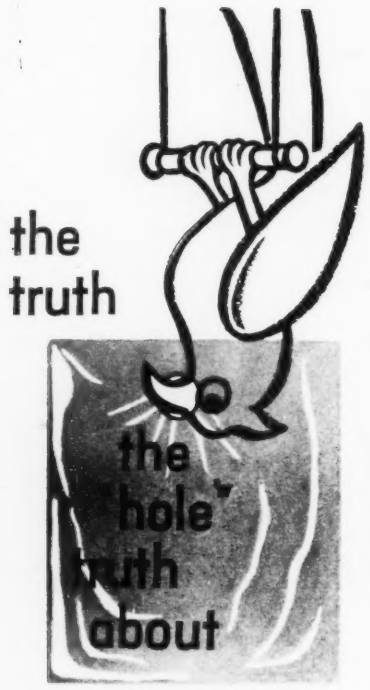
ALREADY CONSUMER-APPROVED. Thorough market tests show that housewives like this can. It opens with conventional can openers and because of the added insulation value of foil cans, frozen foods arrive home in better condition. These same tests showed sharp sales increases because the foil label added sales and prestige advantages . . . cans stand out in shelf and case display.

THIS NEW CAN goes through filling operations, sealing, storage and shipping just like any other can . . . except the cost to you is far lower than ever before.

TO GET MORE INFORMATION and literature, write to Anaconda Aluminum Company, 1430 South 13th St., Louisville 10, Kentucky.

*Patent applied for

ANACONDA ALUMINUM



GROMMETTED POLYETHYLENE PACKAGING

The "success" of your product may well hang by a grommet. Let TOWER — hanging-bag specialists — protect your product and its sales-appeal. TOWER custom designs and delivers polyethylene bags 1) with standard perforations for lightweight, fast-moving products, 2) with new "dust-stop" POLY-GROM®reinforced polyethylene grommets for special support, or 3) with extra-heavy-duty neat, metal grommets that stay-put. And, because TOWER performs every operation right in its own plant — extrudes film, prints, converts — you are assured quality flexible packaging, promptly at a practical price.

For solutions to flexible packaging problems, lean on TOWER — above all

TOWER PACKAGING COMPANY
Wheeling, Illinois LEhigh 7-2510

Patents

[Continued from page 182]

2,971,638, Feb. 14. A dispensing container for pills, comprising a form-retaining transparent inner sheet provided with a plurality of pill-receiving indentations spaced from the periphery of said sheet and defining recesses on one side of said sheet and protrusions on the other side of said sheet.

Plastic Foam Packaging, Charles D. Snelling, Breiningsville, Pa. U.S. 2,971,640. Feb. 14. A package comprising a container, an irregularly shaped object to be shipped having parts of varying resistance to shock and spaced within the receptacle.

Sealing Cap for Containers, Clarence A. Tevander and Robert A. Clark (to Swan Metal Cap Co., Inc., Chicago). U.S. 2,971,663, Feb. 14. A sealing cap for a container having an annular top.

Container, James G. Shakman (to Pabst Brewing Co., Milwaukee, a corporation of Delaware). U.S. 2,971,671, Feb. 14. A can for carbonated beverages comprising a tubular body portion and end closures mounted on said body portion, said end closures being recessed and each of said end closures comprising a continuous outer rim.

Machine for Mounting Spouts in the Tops of Containers, Charles Andrew (to Andrew & Waitkens Machine Co., Inc., New York, a corporation of New York). U.S. 2,972,184, Feb. 21. An apparatus for applying spout members to the tops of containers having apertures therein, said members each having a projection at one side thereof.

Container Filling and Sealing Machines, Rudolph Schmidt (to United Shoe Machinery Corp., Flemington, N.J., a corporation of New Jersey). U.S. 2,972,216, Feb. 21. In a machine for filling and sealing containers, a turret having a plurality of cavities formed to receive containers, means for filling a container, means for positioning a cover on the container comprising a pneumatically operated picker having a cover-engaging surface.

Container Closure and Method, Richard L. Parish, Jr. and Clarence W. Dearing (to American Flange & Manufacturing Co., Inc., New York, a corporation of Delaware). U.S. 2,972,431, Feb. 21. A closure assembly for securement in assembled form to an opening in a wall of an already formed container from the outside thereof, which includes a seating ring formed out of lightweight sheet metal and consisting of an upwardly extending outer portion.

Flexible Thermoplastic Nestable Closure Lid, Alfred Flack and Rodney Ludder (to Lily-Tulip Cup Corp., New York, a corporation of Delaware). U.S. 2,972,432, Feb. 21. A readily flexible one-piece plastic nestable closure lid for containers, said lid having a thickness throughout its entire extent not exceeding 0.020 in. and comprising a bottom end and an upwardly disposed peripheral portion.

Carton, Joseph Thompson (to Coates Board & Carton Co., Inc., Garfield, N.J., a corporation of Delaware). U.S. 2,973,086, Feb. 28. A display carton comprising a top wall, a body portion, bottom, front, rear and end walls.

Container Closure, Howard Roberge (to American Can Co., New York, a corporation of New Jersey). U.S. 2,973,116, Feb. 28. In an interiorly coated can end member which is formed with a depressed panel, a countersink radius wall, a countersink wall which extends upwardly from said countersink radius wall, and a peripheral flange which extends outwardly from said countersink wall at an angle.

Portable Container for Liquids, Brooks Parker, New York. U.S. 2,973,119, Feb. 28. A container for liquids comprising an outer sleeve of paperboard and of rectangular shape in horizontal cross section with flat vertical wall sections, a bottom closure, a top closure of paperboard, a reinforcing interliner within said sleeve embodying a panel section located adjacent each outer wall section.

Container for Packaging Apples, Mark B. Royce (to Continental Can Co., New York, a corporation of New York). U.S. 2,973,127, Feb. 28. A container unit for packaging fruit and the like disposed on trays, said container unit comprising a box having a bottom and upstanding walls, at least one of said upstanding walls having an opening therein for the circulation of air to ventilate the interior of said box.

Carton Connector, Salvatore J. Leone (to The New Haven Board & Carton Co., New Haven, a corporation of Connecticut). U.S. 2,973,128, Feb. 28. A connector for securing cartons together to form a package, which comprises a side panel, a plurality of flaps hinged to one end edge of the panel, a bottom panel hinged along one edge to the other end edge of the side panel, and a plurality of flaps hinged to the opposite edge of the bottom panel.

Dual Locking Construction for Paperboard Wrappers, Orison W. Stone and Laurie H. Campbell (to Continental Can Co., New York, a corporation of New York). U.S. 2,973,129, Feb. 28. Dual locking construction for a paperboard wrapper having the general form of a four-sided tube made from a rectangular blank having edges overlapped at one side of the tube.

Separable Plural Carton and Blank Therefor, Charles E. Cottrill (to Standard Packaging Corp., New York, a corporation of Virginia). U.S. 2,973,130, Feb. 28. A plural carton made from a single blank comprising a common front wall panel, two outer side wall panels, one connected by a score line to one side of the common front wall panel and the other connected by a score line to the other side of the common front wall panel.

Closure and Package Closed Therewith, Ernest H. Tessmer and Edward T. Wilhelm (to The Glidden Co., Cleveland, a corporation of Ohio). U.S. 2,973,234, Feb. 28. In a closure for a container, a cup-shaped body adapted to be releasably applied to a container mouth to close the same, the side wall of said body being equipped with an inwardly extending planar shoulder intermediate to the height of said side wall, the side and top walls of said body upward of said shoulder providing a disk-shaped head space.

NEWS OF THE YEAR IN PACKAGING ! from INTERSTATE

a great technological advance... the first on-machine cast coated folding boxboard... available in colors up to 36 point

Glosscoat

High Gloss Eye Appeal

Glosscoat gives the luxury look and feel to any package. White is whiter — high gloss colors are rich, brilliant, have added depth and realism.

Uniform Printing

Glosscoat prints beautifully. The surface is not only smooth but has a natural affinity for ink — making fine, full color reproduction possible.

Crackproof Folding

Glosscoat's patented coating process provides unusual folding characteristics. Even in heavier weights and calipers it folds without cracking.

Rub and Wear Resistance

Glosscoat resists abrasion, moisture, grease, finger prints and handling abuse for long shelf life. No dulling overprint varnish is needed!

Beautiful Uniform Colors

Glosscoat is manufactured in ten breath-taking pastel colors plus white. Glosscoat opens the door to a new field of boxboard design possibilities.

Exceptional Fade Resistance

Glosscoat offers remarkable resistance to the yellowing action of sunlight. White stays white — colors remain bright — for extra long shelf life.

Weights Up To 36 Point

Glosscoat is the only cast coated boxboard in weights up to 36 point — the only cast coated board in any weight offering a range of colors.

Practical Luxury

Glosscoat is the luxury board at a practical price. Cast coating advantages are now available to thousands of folding box users.

The packaging news of the year is Glosscoat. It is the first high gloss, cast coated boxboard ever to be made directly on the board machine. As a result, Glosscoat has all the advantages and all the economies provided by a single continuous operation.

Major users of consumer packaged goods can benefit in many ways by the important advantages which the entirely new, patented Glosscoat method of on-machine cast coating makes possible.

Product of a 50-year old company noted for its developments in every phase of packaging improvement, Glosscoat offers significant advantages never before available to quantity users of folding boxes, cartons and protective packages.

COLORS! Here is the first colored cast coated boxboard.

WEIGHT! Here is the first cast coated boxboard up to 36 point.

FOLDING! Here is the first cast coated boxboard that folds beautifully without cracking — even in heavier weights.

FADE RESISTANCE! Here is greater resistance to sunlight than ever before obtained.

Yes, Glosscoat is a great technological breakthrough.

Glosscoat is such an important packaging development, in fact, you will want to re examine your entire packaging program without delay.

THE INTERSTATE FOLDING BOX COMPANY, Middletown, Ohio

HORIZON BLUE–611

SHELL PINK–620

STRAWBERRY ICE–621

SUNLIGHT–616

SPACE BLUE–612

GLOSSCOAT®

CAST COATED BOXBOARD IN BEAUTIFUL COLORS

LIGHT AQUA–614

PALE AQUA–613

CANARY–617

ORCHID PINK–618

EGGSHELL–615

Glosscoat is a package designer's dream. For here in a genuine cast coated boxboard is a full range of beautiful pastel colors plus white to open up new design frontiers. ■ Picture the possibilities of using this practical luxury boxboard for your own packages. Visualize the unique effects, the striking beauty, the complete individuality — yes, the enormous all-around competitive sales power which high gloss pastel colored boxboard makes possible. No wonder Interstate's Glosscoat is called: Packaging News of the Year. ■ Use of colored Glosscoat presents no problems! Glosscoat is not an over-wrap, not a varnish, not a lamination. It is a new method cast coated board — in colors — with packaging possibilities never before obtainable. Colors are beautiful, clear, clean and uniform from order to order. ■ And remember, Glosscoat in colors and white is available up to 36 point. Users of large folding boxes and packages, too, can thus tap the immense advantages of this remarkable stock. ■ Make sure that everyone in your organization with an influence in packaging is aware of Glosscoat. Put Glosscoat on the agenda for your next packaging meeting.

FREE COLOR SAMPLES

Glosscoat samples are ready . . . a full range of lovely pastels plus white. Write, wire, or telephone!

THE INTERSTATE FOLDING BOX COMPANY, Middletown, Ohio

50th Anniversary Year — Makers of ROTOSEAL machines and INNER-LINED containers

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4. MAIL — no postage required

Manufacturers' Literature

Described below . . . the latest literature, catalogs and brochures from the packaging industry. Dollar saving and dollar making ideas and data . . . available without charge.

EQUIPMENT • SUPPLIES • SERVICES

RUBBER PLATES. Illustrated bulletins describe stick-on rubber plates that give better impressions, longer wear. For solid area work, fine line work, halftones, etc. Porter & Dugas, Inc. (150-E)

FABRIC LAMINATES. Illustrated folder with samples describes cellulose and plastic sandwich lamination that will not wet through; is highly absorbent, resistant to wear. Can be slit, cut, sheeted, stitched, glued, heat-sealed, etc. Offers high tensile strength, dimensional stability, etc. N.W.T. Corp., Div. of Arkwright-Interlaken Inc. (151-E)

WEIGHT CALCULATOR. 4-page illustrated folder covers weight calculator for simple or statistical weight control. Used alongside filler lines to weigh and record items like coffee, tobacco, soaps, tablets, aerosol cans, etc. Special applications, general description. Scale Specialties, Inc. (152-E)

PAPER BOXES AND LABELS. Illustrated 6-page catalog describes wide line of stock, round and rectangular, set-up paper boxes, including telescope, slide, hinged and shoulder types. Specifications, prices, other data. E. N. Rowell Co. (153-E)

FLEXOGRAPHIC PRINTING. Illustrated folder covers line of rubber plates for flexographic and other rotary letterpress printing. Also, halftone screen guide for rubber plate printers. Mosstype. (154-E)

LUBRICATION. Ready-reference chart lists lubrication points and proper lubricant for all major types of graphic arts equipment. Serves as a lubricating guide to equipment manufactured in Europe, etc. Anchor Chemical Co., Inc. (155-E)

ICE CREAM PACKAGING. Spiral bound illustrated catalog covers complete line of equipment for packaging ice cream. Includes filling machines, fillers and cappers, etc. Complete information, specifications, other data. Anderson Bros. Mfg. Co. (156-E)

ELECTRONIC COUNTER. Illustrated 4-page folder covers electronic batch counter that counts tablets, pills, capsules, etc. Complete description, specifications, other data. The Burnet Co. (157-E)

CAN SORTERS. 8-page illustrated booklet describes line of automatic can sorters and uncasers. Also includes four-flap case opener. Complete descriptions, schematic diagrams, specifications, other data. Atkron, Inc. (158-E)

BOX CLOSING. 36-inch x 24-inch wall chart illustrates simplicity of box closing using a single strip application of reinforced sealing tape. Also provides instructions concerning recommended storage and handling of reinforced tape. Atlantic Gummed Paper Corp. (159-E)

HEAT SEALER. Illustrated bulletin describes heat sealer that seals all size polyethylene and pliofilm bags up to 12 inches. No other machine required. Description, specifications, other data. Bag-O-Matic Packaging Equipment Co., Inc. (160-E)

MULTI-SPEED MOTORS. 4-page illustrated folder describes multi-speed motors—polyphase and single phase. Covers constant-horsepower type, constant-torque type. Complete descriptions, specifications, other data. Century Electric Co. (161-E)

AEROSOLS. 8-page illustrated folder describes operation and facilities of the nation's largest custom aerosol packager. Complete description, general information. G. Barr & Co. (162-E)

LIQUID PACKAGING MACHINE. 4-page illustrated folder describes liquid packaging machine for all types of liquids. Uses almost all materials, laminated and unsupported films. Produces up to 200 packages per minute, etc. Description, features, other data. Circle Design & Mfg. Corp. (163-E)

AEROSOL VALVES. 8-page illustrated book describes line of aerosol dispensing valves and protective valve covers. Specifications, advantages, other data. Clayton Corp. (164-E)

CAN, BOTTLE CAPS. Illustrated sheet covers one-piece can and bottle caps that offer positive, self-lock seal—yet need no liner. Description, features, other data. The Dover Molded Products Co. (165-E)

BLISTER PACKAGING. 2-page bulletin describes typical extrusion conditions and properties of plastic that is well suited for blister, bubble and skin packaging. Offers high sparkle, transparency, toughness. Eastman Chemical Products, Inc., Plastics Div. (166-E)

WEIGHT SENSING. 8-page illustrated book shows how measurement of weight or force is applied for automatic control. Can classify, record, imprint, count, etc. Complete description, specifications, advantages, typical applications. The Exact Weight Scale Co. (167-E)

TACKERS, STAPLERS, NAILERS. 4-page illustrated brochure describes tackers, staplers and nailers that are used in making crates, installing corrugated liners and supports, closing boxes, attaching shipping labels or inventory cards, lining boxcars, etc. Complete descriptions, features. Fastener Corp. (168-E)

TEMPERATURE CONTROLLERS. 8-page illustrated brochure describes temperature controllers and indicators with thermistor sensing. Complete electrical-mechanical specifications, available modifications, illustrated descriptions of major features. Fenwal, Inc. (169-E)

FOIL CONTAINERS. 16-page illustrated book describes complete line of rigid aluminum foil containers for frozen foods, bakery, dairy or food serving industries. Covers advantages of foil containers, types of covers and lids. How containers are measured, different edges available, other special features. Kaiser Aluminum & Chemical Sales, Inc., Foil & Container Div. (170-E)

PLASTIC FILMS. 16-page illustrated book covers complete line of plastic films for packaging. Discusses properties and characteristics, technical data, how supplied, processing methods, typical applications. Kalle Aktiengesellschaft. (171-E)

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EQUIPMENT • SUPPLIES • SERVICES

FORK LIFT TRUCKS. Illustrated brochure describes complete line of electric fork lift trucks—with load capacities of 1,500 lbs. to 4,000 lbs. Fast lift and travel speeds, extra-free lift masts for lower clearances, short turning radius, etc. Complete description, advantages, features. Lewis-Shepard Products, Inc. (172-E)

SINGLE FILER. Illustrated bulletin describes high speed single filer for empty or filled jars, cans and bottles. Unscrambles and feeds up to 600 containers per minute. Description, specifications, other data. The Lodge & Shipley Co., Climax Products Div. (173-E)

CONVEYORS. Illustrated bulletin describes self-driven power conveyors for bottle or can production lines. Adjustable to any length from 4 ft., adjustable in height, variable speed drive. Description, advantages, features. The Lakso Co., Inc. (174-E)

MOTORS. Brochure describes right-angle worm gear motors, including specialized models: totally-enclosed, explosion-proof, flange-mounted, single phase, and variable speed. Descriptions, features, other advantages. U. S. Electrical Motors, Inc. (175-E)

VIBRATORS. Illustrated 4-page folder describes air, electric, gasoline and hydraulic-powered vibrators for any application requiring a vibrator of great power and light weight. Descriptions, applications, features. Martin Engineering Co. (176-E)

PACKAGING MATERIALS. Folder and sample sheets describes line of plastic-coated and laminated packaging materials. Samples include pouch paper, blotter paper, gold metallic—all coated with polyethylene. Typical applications include packaging for foods, tobacco, soft goods, hardware, etc. The Marvellum Co. (177-E)

WEB PROCESSING. 6-page illustrated folder describes complete line of coordinated equipment for web processing. Complete descriptions, features, other data. Midland-Ross Corp., Waldron-Hartig Div. (178-E)

BAG FORMING, FILLING, SEALING. 4-page illustrated folder describes completely automatic method of packaging produce such as candy, detergents, frozen vegetables, coffee, or any free-flowing product. Bag speeds from 25 to 75 a minute from a single tube, bag size range of 3 in. to 15 in. long and 2 in. to 8⅝ in. wide. Package Machinery Co. (179-E)

LIQUID FILLING. Spiral bound illustrated catalog covers line of liquid filling equipment—including vacuum fillers, gravity fillers, junior fillers, foamless and dripless fillers, case fillers, etc. Complete descriptions, specifications, features. Packer Machinery Corp. (180-E)

ROLL LEAF MARKING. Illustrated bulletin covers process of roll leaf marking for identification, labeling, decorating, etc. Attached question and answer sheet gives full information on process. Peerless Roll Leaf Co., Inc. (181-E)

TOOL COMPONENTS. 24-page illustrated book points up advantages and savings gained through use of standardized tool components. Case histories, citing specific examples, cover use as standard parts for jigs, fixtures, tools and dies. PIC Design Corp. (182-E)

WASHING EQUIPMENT. Illustrated folder describes complete line of washing equipment that meets standards of the pharmaceutical industry for clean and sterile ampules, vials and bottles. Complete descriptions, specifications, features, other data. Popper & Sons, Inc. (183-E)

PREBREAKING GLUER. 4-page illustrated folder describes prebreaking gluer that offers centralized controls, squaring unit, belt take-up, etc. Complete description, features, specifications, other data. Post Machinery Co. (184-E)

PROTECTIVE LINERS. 18-page illustrated book describes complete line of plastic liners for drums, cans, pails and cartons . . . and plastic bags, covers and specialties. Complete descriptions, features, applications, other data. Protective Lining Corp. (185-E)

CASTERS. 16-page catalog contains helpful information on selection of casters for a wide variety of applications. Data presented covers wheel diameter and face, rated capacity, wheel type, overall height, etc. The Rapids-Standard Co., Inc. (186-E)

HEAT-SEAL LABELS. Illustrated brochure describes method of fast, efficient marking and attaching of heat-seal labels on soft goods, film packaged items, cellophane and hard boxed items. Complete description, features, other data. Soabar Co. (187-E)

INDUSTRIAL EQUIPMENT. 56-page illustrated catalog covers complete line of industrial equipment—including bins, cabinets, boxes, stands, scales. Also tables, shelving, stools, baskets, etc. American Pressed Steel Corp., Standard Equipment Div. (188-E)

SEALS AND TAGS. Illustrated folder describes five ways in which seals and tags help to sell your product. Suggested sizes and shapes, general description, other data. Stoffel Seals Corp. (189-E)

TEST ABRASER. 12-page illustrated booklet describes precision built test instrument designed to evaluate the resistance of surfaces to rubbing abrasion. Applications include tests of painted, lacquered, electroplated surfaces and plastic coated materials, etc. Complete description, specifications, price list, other data. Taber Instrument Corp. (190-E)

METAL CONTAINERS. 18-page illustrated booklet describes complete line of engineered containers for all material handling operations. Standard models, warehouse models, bearing plate models included. Complete description, specifications, features, other data. Union Steel Products Co. (191-E)

POLYETHYLENE. 12 page illustrated booklet describes new high-density polyethylene for the packaging field that combines durability and processability. Physical, chemical and electrical properties. Also, specific advantages, features, grades and applications. Goodrich-Gulf Chemicals, Inc. (192-E)

COUNTERS. 4-page illustrated folder describes multiple-unit reset counters for quick and accurate counting. Applications include product inspection and quality control, estimating, etc. Description, advantages, specifications. Veeder-Root, Inc. (193-E)

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IMCO containers (like this bottle for liquid Trend*) win thousands of customers, for hundreds of packagers, every day of the world. Their arresting colors and imaginative shapes win the battle for attention on the retailers' shelves. Their utility and durability win repeat sales after they've been combat-tested in the home.

It's quite possible that a whole new marketing world awaits the introduction of your product in an IMCO container. New developments in the chemistry of polyethylene and polypropylene have vastly increased their capacity to hold products like household products, creams and perfumed cosmetics. At the same time, costs have been driven down until they are directly competitive with glass and tin.

We'll be happy to help you run tests on IMCO containers, and we can quote prices on stock or custom-made bottles and jars. Call the sales office or plant nearest you or write direct to our Sales Manager in Kansas City. We'll have a man contact you within 24 hours.

*A PRODUCT OF PUREX CORPORATION, LTD.

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A Division of Rexall Drug and Chemical Company

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WAKE UP APPETITES WITH FLAVOR APPEALING PACKAGES FROM KVP SUTHERLAND

KVP SUTHERLAND PAPER COMPANY.....

They looked so delicious that Mom bought two ice cream flavors instead of one, three cooky flavors instead of two. The youngsters agreed. And what a party.

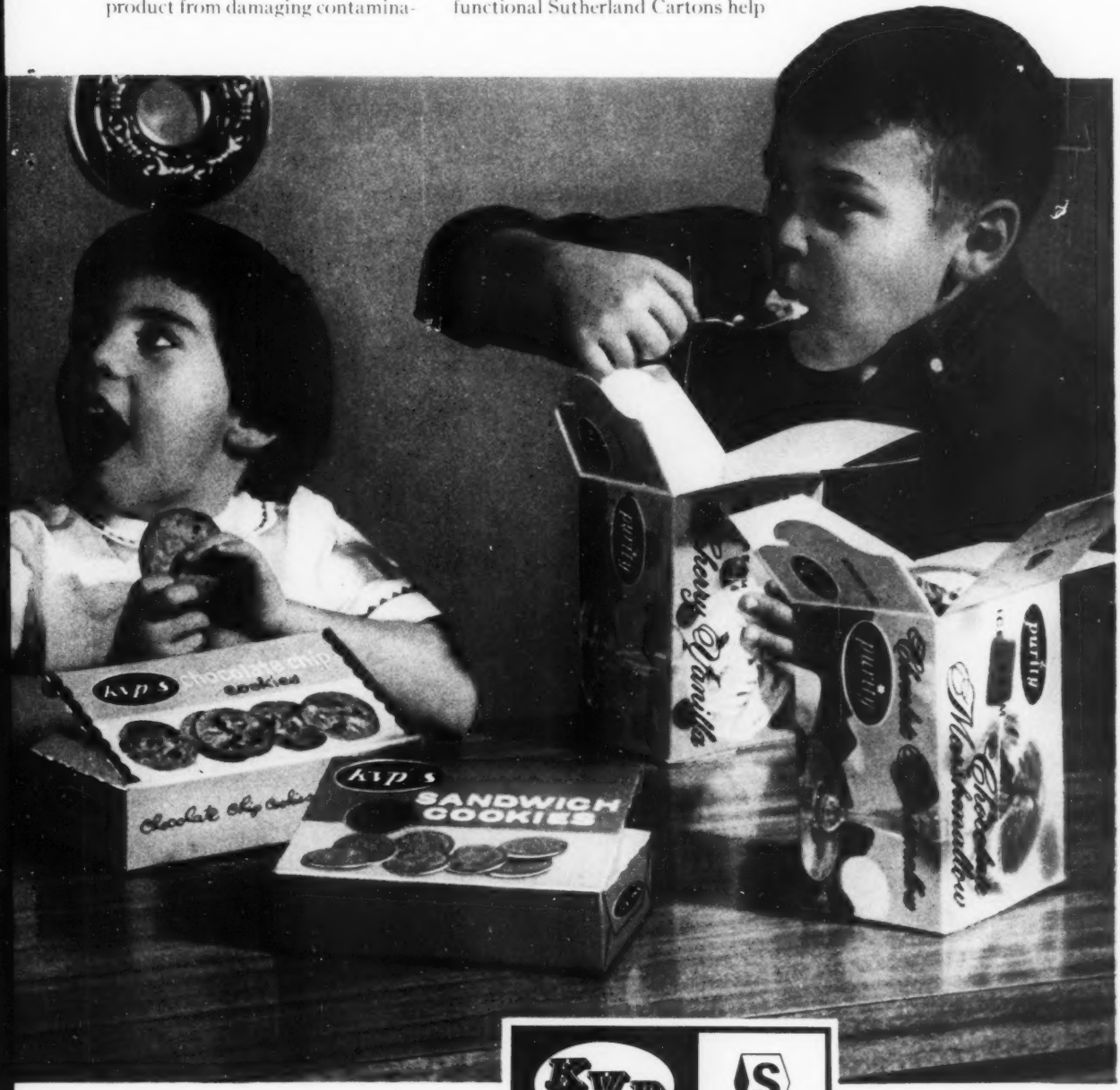
Colorful, flavor appealing pictures wake up appetites, create purchases for sampling. And repeat purchases come because KVP Sutherland packages shield your quality product from damaging contamination, keep your product fresh.

With KVP Sutherland packaging, one glance tells Mrs. Shopper your product flavor. Helps her find her planned purchases, induces unplanned purchases.

Ask about Sutherland Ice Cream Cartons. Here's a handsome family of ice cream flavors tastefully pictured to prompt impulse sales. And functional Sutherland Cartons help keep your production lines operating at optimum efficiency.

Ask about KVP Impact!®, a medium price luxury overwrap to bring your cookies to life in taste tempting colors. Excellent performance on standard overwrapping equipment.

Whatever your carton, overwrap or innerwrap needs, we welcome the opportunity to serve you.



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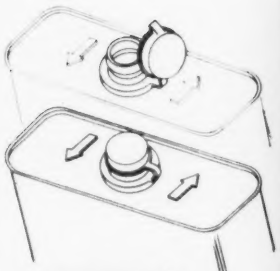
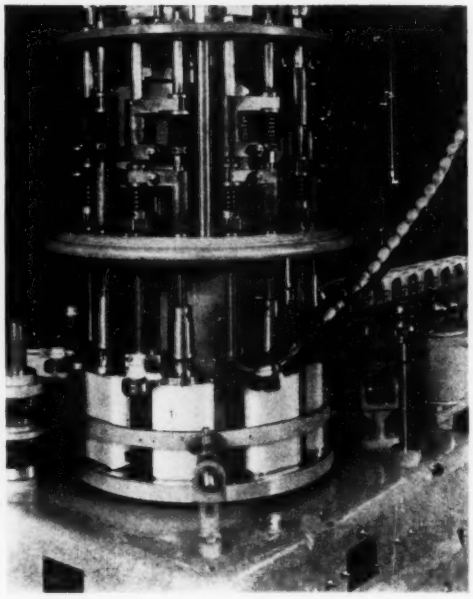
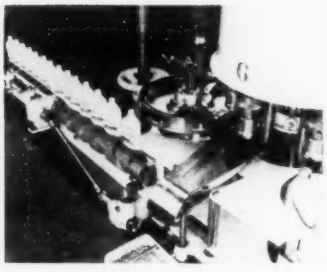




HERE'S BEST WAY TO APPLY THE NEW PLASTIC "FLIP CAPS"

Plastic "Flip Caps" give the new 1961 look to both "F" and "I" type cans. Consolidated has perfected the dependable, fully automatic method for applying these new plastic closures which replace the soldered screw-neck nozzles which have been in use for over 25 years.

The new D8-FS Consolidated Capper is available in models with 2 to 8 spindles and with capacities from 40 to 250 containers per minute. The plastic fitments with *captive plastic caps* are fed from a hopper and inserted by straight down pressure rather than rotary screw motion previously used on metal screw caps. Caps are oriented with hinge strap parallel to length of can. Cost-consuming soldering is eliminated by the neckless can — your packages are up-dated for increased consumer appeal. Consumers prefer this type cap because of convenience of handling. Both quart and pint sizes can be handled with equal ease.



Consolidated D6-F Capper in use at S. C. Johnson & Co. applying plastic screw-type closures with captive caps to plastic containers. The new design, adjustable tension grips hold plastic containers firmly without collapsing them. Capacity 120 containers per minute.

For complete information about this most modern equipment for applying these most modern caps, write today.

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PI Forum scheduled

The 23rd Annual National Packaging Forum of the Packaging Institute will be held Oct. 18-20, 1961, at the Biltmore Hotel, New York. Iven G. Nichol of Morningstar-Paisley, Inc., chairman of the Institute's Forum Plans Committee, has announced that 12 seminars of great current interest to packagers will highlight the event, along with the presentation of PI's annual awards and a special opening-day feature. ●

PMMI machinery show

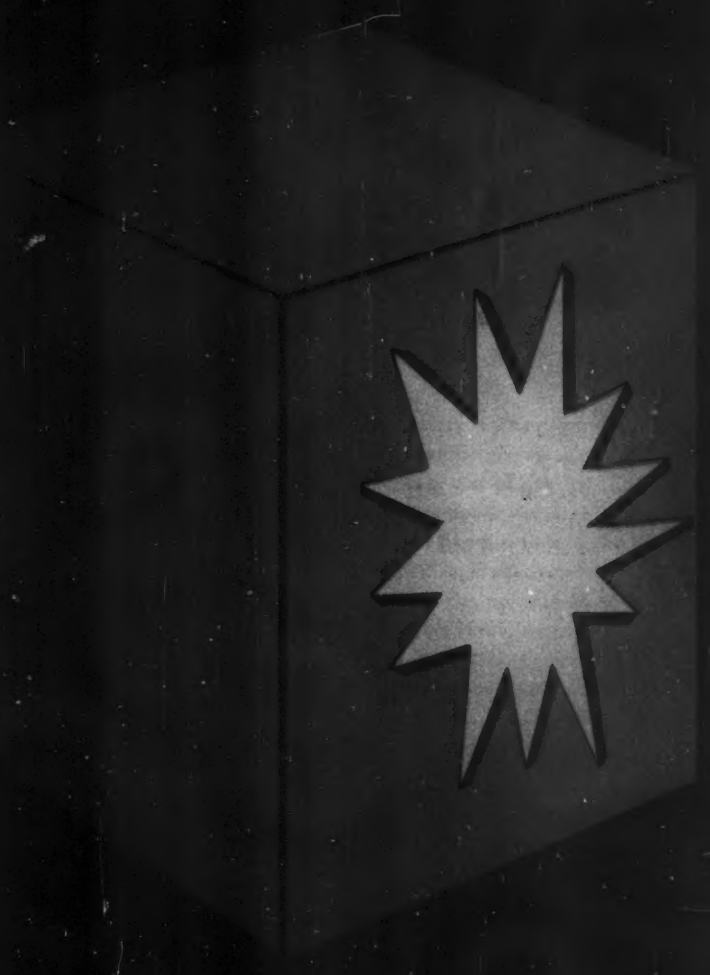
The Packaging Machinery Mfrs. Institute Machinery Show at Cobo Hall, Detroit, Nov. 7-10, will set several new records in this biennial display of engineering advances, according to William W. Anthony, Jr., PMMI show committee chairman and executive vice president of the Crompton & Knowles Packaging Corp., Bellwood, Ill.

At this fourth machinery show, more exhibitors than ever before will occupy more total space than in any preceding show, accounting already for more than 85% of the available display area in this newly built exhibition hall.

Organized in 1955 by packaging-machinery manufacturers who wanted a show heavy in machinery, with engineering strongly stressed, but in association with technical displays of such closely related packaging materials as wrapping stock, cartons, adhesives, glass, metal, plastics, etc., the show, Mr. Anthony reports, has lived up to initial expectations. In fact, the 1961 show will have 50% more packaging-machinery manufacturers with products on the floor than in 1956, occupying 100% more exhibit area than in that first year's show.

For the first time, this November's show will be enhanced by an educational seminar, a two-day work shop on the subject of "Planned Maintenance: the Profit Tool of Modern Management." Representatives of packaging-machinery manufacturers and users will cover the most important phases of preventive maintenance to help packagers obtain maximum benefits from their equipment installations.

Five authorities scheduled to lead discussions are Edward Brennglass, Packaging Corp. of America, who



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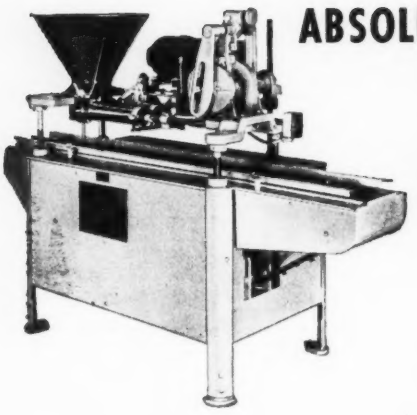

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will open the forum Nov. 8 with a discussion on preventive maintenance's significance to the contract packager; G. Douglas Reed, McCormick & Co., on "Do Machinery Folks Understand?"; Louis J. Rouleau, Economic Machinery Co., discussing the need for plant managements to become more aware of weaknesses and abuses in their maintenance activities; Russell Beatty, Wentworth Institute, on "What the Technical Institute Offers," and Cornelius Wandmacher, dean of the College of Engineering, University of Cincinnati, on "The Role of the Engineering College."

Richard Wellbrock of New Jersey Machine Corp. is conference chairman. No additional registration fee is charged for the conference. ●

Glass price rise

Increases in some glass-jar and glass-bottle prices, effective April 1, have been announced by major suppliers. This is the first broad increase since 1957 and will vary among items, according to what one spokesman termed "an exhaustive study of cost-price relationships." Rising labor costs—nearly 60 cents an hour since 1957—were generally cited as necessitating the increase. However, many suppliers noted that other costs have risen just as sharply in the last three years. The increase is said to be "moderate," but several company spokesmen emphasized that the increase is not general and that prices of some items are virtually unchanged. ●

Flexographic winners

Seventeen awards in the recent second annual competition of the Flexographic Technical Ass'n. were won by 12 member companies. Plaques were presented at FTA's Third Annual Meeting and Technical Forum, held in New York.

The winners in four classifications were: *Film*—Goodren Products Corp. (Best of Show); Cadillac Products, Inc.; Cellu-Craft Products Corp.; Cello-Foil Products, Inc. *Paper*—Meyer-Pak, Inc., Div. Frank S. Meyer Co.; M. B. Claff & Sons, Inc.; Maryland Cup Co.; Arkell & Smiths. *Paperboard*—Dairypak Butler, Inc.; Bloomer Div., Riegel Paper Corp. *Foil*—Topflight Corp. and Reynolds Metals Co. ●

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AND HERE'S HOW SHOWCASE BOXES HELP SELL YOUR PRODUCT

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TAKE AN HONEST LOOK AT YOUR PRESENT CORRUGATED BOX. IT'S USEFUL, BUT IS IT AS FORCEFUL A SALESMAN AS POSSIBLE? NOW, WITH PREPRINT, ST. REGIS CAN CHANGE IT FROM A PLAIN SHIPPER TO A HANDSOME SHOWCASE. THE GREAT VALUE OF PREPRINT IS BEAUTY. IT PROMOTES YOUR BRAND IDENTITY . . . MAKES BETTER-LOOKING IN-STORE DISPLAYS . . . GIVES POSITIVE PRODUCT IDENTIFICATION, IN TRANSIT . . . ON THE SALES FLOOR . . . EVERYWHERE IT GOES. AND, WITH SUCH FINE DETAIL, THE PROMOTIONAL OPPORTUNITIES BECOME UNLIMITED (I. E., GAMES, PUZZLES, ETC.). ANYWHERE YOU SEE IT, A BEAUTIFUL PREPRINT BOX IS THE FIRST TO CATCH AND GLADDEN THE EYE.

HERE'S WHY ST. REGIS PREPRINT BOXES ARE DIFFERENT. THE OLD METHOD OF PRINTING ON SOFT FLATS OF ALREADY-COMBINED BOARD HAD MANY OBVIOUS LIMITATIONS. BUT NOW, BEFORE THE SHEETS ARE COMBINED INTO CORRUGATED BOARD, WE "PREPRINT" YOUR DESIGNS ON THE TOP LINER WITH GIANT ROTARY PRESSES, LIKE THOSE USED IN PRINTING FULL-COLOR MAGAZINES. THAT'S WHY ST. REGIS PREPRINT MEANS CLOSER REGISTRATION, MORE COLORS AND FINER REPRODUCTION.

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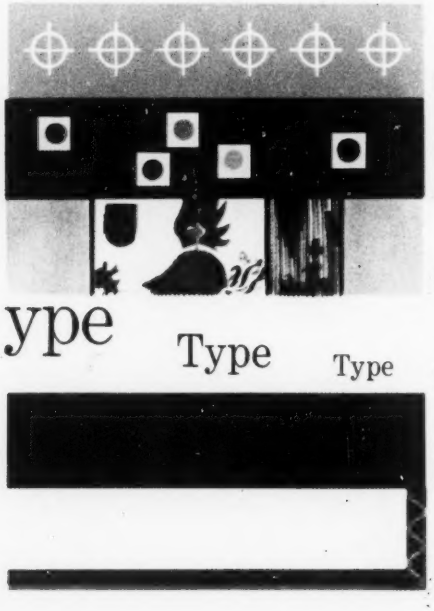

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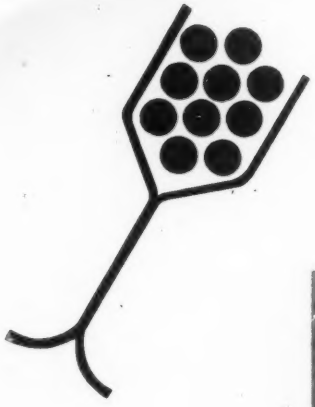

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CONTAINER DIVISION

St.Regis PAPER COMPANY

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Boil-in-bag association

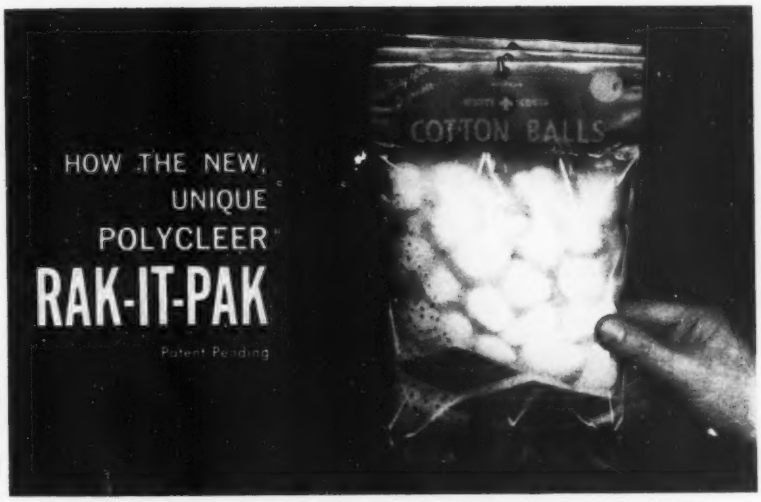
The Modern Foods Council, a promotional organization recently formed on behalf of boil-in-bag frozen foods, held its organizing meeting March 5 in Dallas with more than 60 participants. Charter members include nearly all boil-bag users among national and regional frozen-food processors, plus a number of suppliers as affiliates.

The new group already appears to have stirred more interest than any similar organization formed in recent years. Its 1961 objective: a carefully plotted public-relations program to sell the concept of boil-in-bag foods. It is felt that early emphasis on consumer education should help avoid pitfalls faced by other new types of food packages during their introductory stages. Bucklin & Associates, Chicago, heads the PR program.

While such obvious convenience aspects of boil-bags as time saving, elimination of soiled cooking utensils, cooler kitchens, etc., will not be neglected, the program will highlight other advantages as well. Psychological factors of product quality, versatility, social acceptance and opportunity for individual creativity, all linking the use of boil-bags with the housewife's concept of herself as an efficient home manager, will also be stressed. The PR program starts this month. MFC will also act as an industry clearing house for information, sales statistics and standardization of container sizes.

However, the new group has run into an initial obstacle. A plan to adopt the generic term "aqua-pack" in place of the easy-say but unattractive "boil-bag" has foundered. Legal inquiry revealed the term "aqua-pack" is a registered trademark of a film supplier and hence cannot be used. So far no suitable alternative has been chosen.

MFC officers during its organization period are: president, Edward Coale, vice president of Seabrook Farms; vice president, Robert Moldafsky, merchandising director of Kitchens of Sara Lee; and secretary-treasurer, Joseph J. Fox, vice-president of Fox DeLuxe Foods. Directors include Mr. Coale and Mr. Moldafsky, plus Lee Berlin, film products manager of Minnesota Mining & Mfg. Co., representing supplier members. ●



. . . HELPED WHITE CROSS BOOST PROFITS

SAVES UP TO 60% ON PACKAGING COSTS! Polycleer Rak-It-Pak — the new, thrifty all-in-one-piece rack display bag (made of 100% tough, sparkling Polycleer Material) — offers you astonishing savings by eliminating whole steps in making, loading and sealing the package.

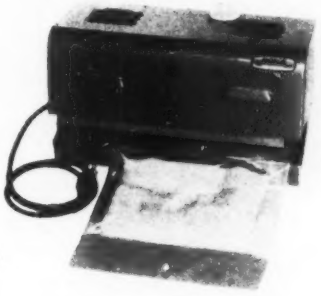
NO PAPER HEADER!

Rak-It-Pak's sturdy, built-in header *alone* saves the cost of paper, printing, stapling, grommeting.

SELLS YOUR PRODUCT "ON SIGHT!"

The Rak-It-Pak keeps your product band-box fresh until used.

SAVES ON LOADING AND SEALING, TOO!



Simply load and seal the Rak-It-Pak and your product is ready for market. A bottom opening and extended lip make for faster, easier loading.
For rapid feeding and improved sealing, Northland recommends — and supplies — the new Bag-O-Matic Poly Heat Sealer.

Northland manufactures and color prints Polycleer Bags by the millions under rigid quality control. All sizes, gauges, styles, shapes. Plain and printed — 1-2-3-4 colors.

In applying the Rak-It-Pak to your product, Northland's tested package and design ability assures your complete satisfaction. For full details, write or call Northland today.

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Effective quality control and prescription protection • Brockway's 16 quality checks assure you of protected purity from manufacture to prescription sale. Your carefully compounded prescription is packaged in a flawless, clean ethical container of unsurpassed quality. Choose BROCKWAY VISION IN GLASS. You'll find Brockway bottles and vials bring strong customer acceptance. Remember, too, only Brockway presents the Safety-Cap Bottle—extra protection for curious children, all too prone to get at medicines not intended for them.

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COMPANY, INC., Brockway, Pennsylvania

Sales Offices in Principal Cities

SUBSIDIARIES: Demuth Glass Works, Inc., Parkersburg, W. VA.
Tygart Valley Glass Co., Washington, Pa.
Celluplastics Inc., Newark, N. J.

The packaging supplier takes a hand

[*Continued from page 103*]

suitable for two or more models of different sizes. More dramatically, one basic carton is now used to package 15 models of power drills.

Additional economies—in packaging time, material costs and shipping weight—were chalked up when the supplier pointed out that Porter-Cable was overprotecting many of its products by floating them inside the shipper with multiple die-cut cushioning inserts. Some products were cradled by as many as five intricate inserts. Today, only one simple corrugated insert—designed by the supplier—does a more-than-adequate job of in-carton protection for most items, the packager reports.

The supplier-company's recommendation of packaging materials never before used by Porter-Cable—and which are not available from this supplier—also has been instrumental in speeding up cartoning time while whittling the need for interior protection. Among these "new" protective packages are blister cards for router bits and tough polyethylene tubes for lubricating grease. The latter, replacing heavier collapsible metal tubes, require no cushion protection against damage through carton handling.

Since the inception of this supplier-guided repackaging program, Porter-Cable reports that total packaging costs have declined 25%, offsetting by far a 10% increase in corrugated-container costs occasioned by the adoption of color-printed white linerboard.

This is proof enough of the value of making room for a supplier-company representative on the corporate packaging committee, the company believes. But the benefits of such a program range far beyond basic economy. They are summed up in these comments by M. V. Nodar, Porter-Cable Co.'s sales-development manager and chairman of the packaging committee:

"We now have a most attractive package, plus a consistent brand image with easy product identification, that lends itself to both individual and mass display. Our products are now more easily merchandised and the packages are becoming familiar to distributors and consumers.

"Internally, we have made all departments happy, because this program is making their jobs easier and is saving them operating costs. We expect this continuing close liaison between our packaging supplier and ourselves to pay off even more handsomely in the future." ●

Barrier bag formed and filled in plant

[*Continued from page 123*]

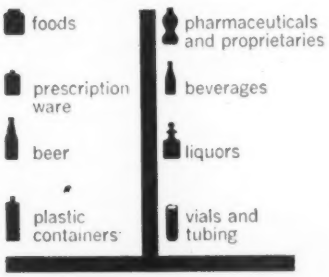
or film-feed station, a longitudinal seal is made in the film "tube" by a reciprocating sealer. The mandrel is then turned 45 deg. to the second station, where tuckers and a heat sealer close the bottom of the tube to form the inner bag.

At the third station, a pre-cut paper sheet is pre-glued with a cold latex adhesive, then wrapped around the film bag on the mandrel. At subsequent stations, located 45 deg. apart, the square-bottomed paper bag is folded, then held briefly under compression, code-stamped with the date, stripped from the mandrel and raised to a vertical position by chain-mounted buckets on the straight-line filling machine.

To obtain close and uniform fill, the pre-ground coffee is weighed on an accurate and automatic balance, and dropped into a series of rotary filling hoppers which rotate over the bags and drop one pound in each container. A vibrator under the filling section helps to settle the product in the bag. Subsequently, a mechanical tamper levels the coffee and excess bag material is trimmed. This trim is easily adjusted for variations in the height of fill. The inner bag is heat sealed (through the paper) by heated bars and the top of the bag is folded by double plows and held in place with latex glue applied by a rotating wheel.

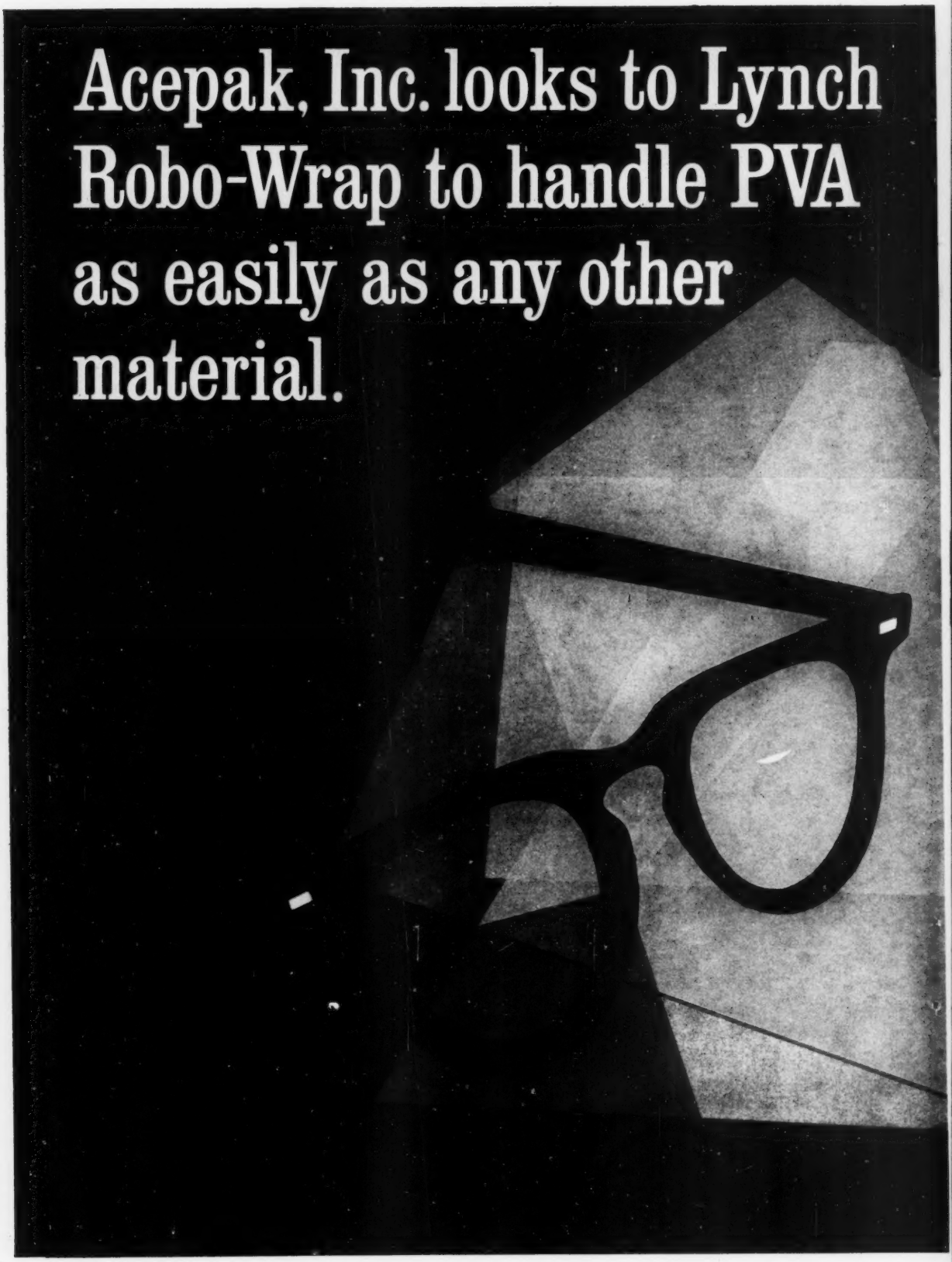
With the package and mechanical technique worked out, First National proposes next to install a baling machine to bag individual containers for shipment. With this change, the entire packaging operation will utilize flexible packaging materials and achieve a high level of performance at minimum cost. ●

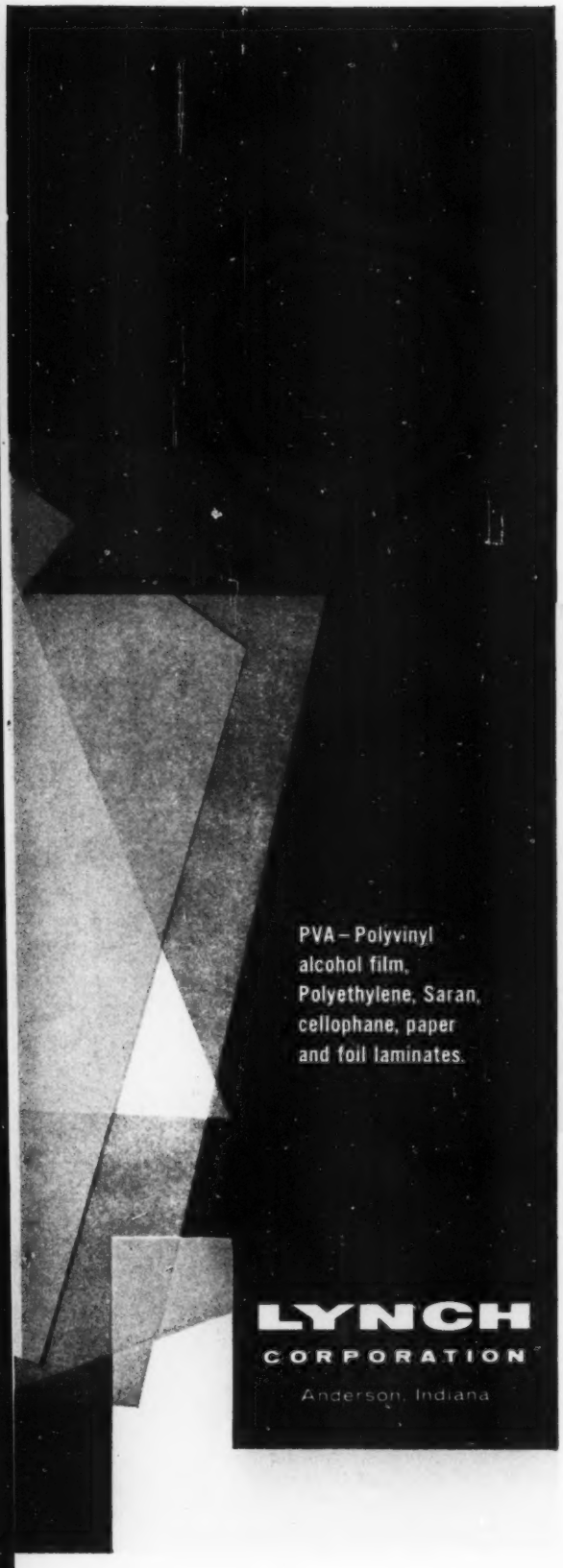
Brockway, first name in containers for:



Integrity in glass since 1907

Acepak, Inc. looks to Lynch Robo-Wrap to handle PVA as easily as any other material.




PVA – Polyvinyl alcohol film, Polyethylene, Saran, cellophane, paper and foil laminates.
LYNCH
CORPORATION
Anderson, Indiana

Yesterday PVA Film Was Hard to Handle

Today a standard 2-tube Robo-Wrap machine teamed with a Lynch volumetric feeder makes PVA as sure and easy to handle as any other film.

At Acepak, Inc. in Chicago, Robo-Wrap is sending the world's leading detergent, soap powder and chemical brands to market at a rate of 110 to 120 PVA packages per minute.

How does a packaging machine designed for other films *also* handle PVA?

"Robo-Wrap's unique hand-over-hand action reduces machine speed—lengthens dwell time—permits lower temperatures," says Mr. Arthur Rothschild, President, Acepak, Inc.

The result: less cost per package . . . not enough down-time on volume production runs to worry about, because Robo-Wrap's hand-over-hand action holds jaws in sealing position longer, thus preventing torn roll stock. Robo-Wrap automatically forms, fills and seals pouches and pillow-packs—plain or printed—and runs with or without electric eye registration.

To keep up with demand for PVA packaging, Acepak, Inc. has ordered additional Robo-Wraps.

Whether you package liquids, powders, solids or granules . . . in poly, cello, PVA, plastic or laminate pillow packs . . . look to Lynch for automated systems that cut costs *all along the line.*

Lynch engineers will help plan your handling and packaging system without obligation.

Volumetric Feeders specially designed for trouble-free flow of uniform density products.

Manufacturing Engineers of automatic processing equipment in the glass, packaging, plastic and other industries.

LEADERS LOOK TO LYNCH—for machines that package almost everything

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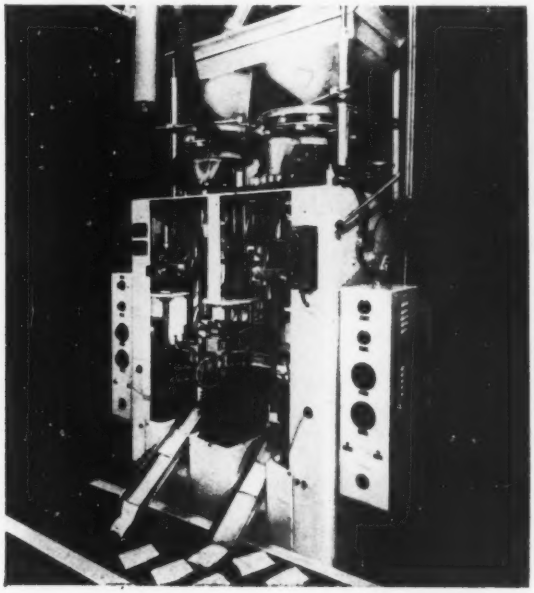

Robo-Wrap Model 201-V with Lynch volumetric feeder at Acepak, Inc., Chicago, Ill.

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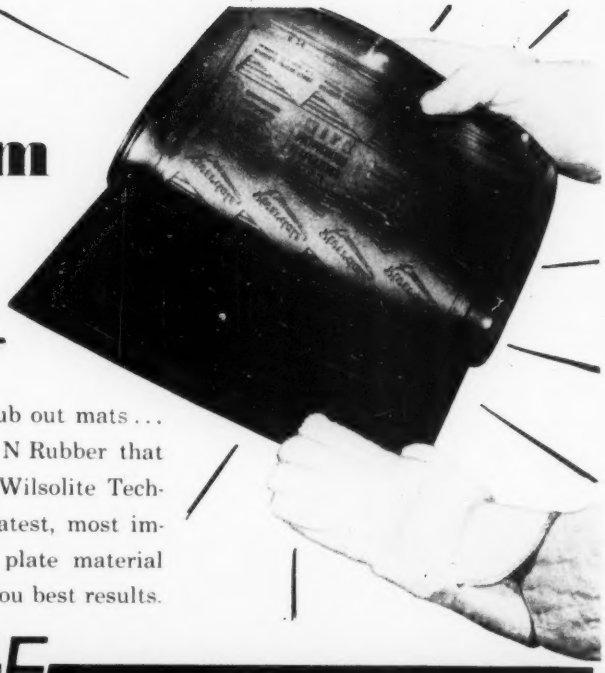

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1827 Niagara Street, Buffalo 7, New York

WAREHOUSES AND SERVICE COAST TO COAST AND CANADA

New developments, costs discussed at roll-label seminar

Latest developments in roll-type thermoplastic labels were spelled out for more than 100 packaging production men in a recent give-and-take seminar at New Jersey Machine Corp., Hoboken. Discussed by packagers, printers and paper suppliers were all of the problems and advantages connected with this growing labeling technique and a new machine that promises to expand the roll-fed principle to a number of new packaging applications.

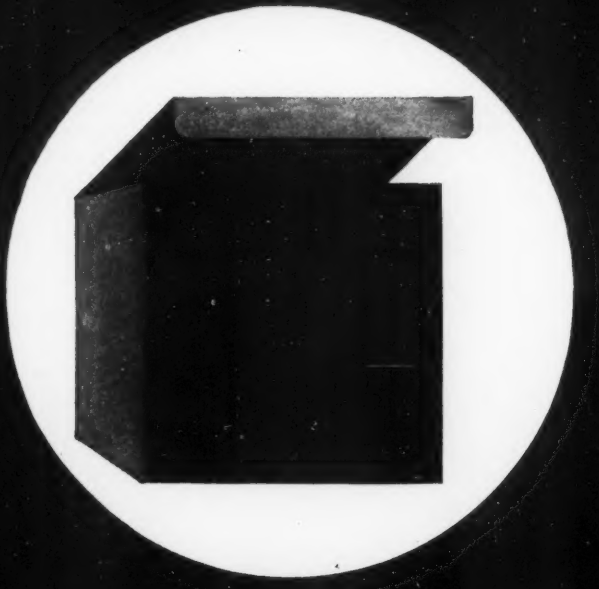
Discussion centered on (1) the cost of roll-type thermoplastic labels as compared with both the cut thermoplastic type and roll-fed glue labels, (2) the need for more positive mechanical devices to check on labeling accuracy and (3) the quality of gravure-printed roll labels vs. that of lithographed or letterpress labels.

Cost took the spotlight. Different packagers cited figures ranging from 50% savings to 50% higher cost with the use of roll thermoplastic labels. From the discussion, the answer appears to be that the roll labels are economical in quantities greater than 250,000 if printed by gravure or if handled by a lithographer with high-speed automatic equipment for slitting, punching and perforating the labels. Roll labels have a natural cost advantage on the packaging line because they are easier to index and apply, which cuts down on time, it was said.

Even though roll labels are a practical guarantee against mislabeling (and avoid the cost of verification and separte code imprinting), packagers voiced demands for drop-in templates that would prevent the photo-eye registration device on labelers from picking up a punched, notched or printed registration mark in any but one, vernier-calibrated position. And they want more positive checking devices that would spot dropped type in the machine code imprinter or faulty labels on the bottles. It was noted that several of these machine attachments are now under development.

On the question of quality, packagers with experience reported that gravure-printed labels run about 10% less in appearance than lithographed or letterpress-printed labels, but claimed that such differences are too slight for practical effect and do not offset the marked advantage in costs enjoyed by gravure labels printed in large quantity. The only limitation is that such labels must carry a printed registration mark, since punching or notching equipment cannot be attached to a gravure press. However, there are now labeling machines that can accurately handle printed-mark labels at speeds up to 300 labels per minute and many packagers reportedly prefer printed marks, because they do not deface the label.

Also shown at the conference was a new roll-fed thermoplastic labeler that incorporates a letterpress imprinter for complete printing of the labels. Designed to handle cartons, this semi-automatic unit is regarded as highly useful for making changes on pre-printed packages and for products whose identification is changed frequently for foreign-shipment requirements. ●



BOLD AND BRILLIANT FAST SETTING QUICK DRYING FOR LETTERPRESS AND OFFSET...

The quick set, fast dry and high gloss of IPI's revolutionary Speed King inks for general commercial use are now available to package printers!

Speed King Carton inks set so fast—even on patent coated boards—that offset rarely is a problem! This means higher press loads without racking, less handling, and considerably less spray than needed for conventional gloss carton inks.

Speed King's gloss on clay coated and on cast coated stocks such as LUSTERKOTE, KROMEKOTE, ULTRA-GLOSS, etc., rivals that of the finest gloss carton ink. And because it's a more uniform gloss, even lower cost stocks print better!

Speed King's split-second set and amazing dry (as little as 2 hours) mean faster processing of the printed board—with obvious advantages to the carton printer.

Speed King is stable on the press; halftones don't muddy up, small type stays open.

Equally important, there's extra "mileage" in every can—and that means more cartons per can!

These wonderful new inks—both letterpress and offset—are now available from your nearest IPI branch, in a wide range of popular carton colors.

Try them on a really tough job—and see the definite difference!

CORPORATION DIVISION

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Folding-box meeting

In contrast to last year's meeting, which was characterized by extreme optimism, the Folding Paper Box Assn. of America's 1961 annual meeting in Chicago recently faced facts more realistically. The recurring theme: business could be a whole lot better. FPBAA members listened intently as non-industry speakers suggested ways in which this could be accomplished.

William D. Enzie, director of corporate packaging, General Foods Corp., congratulated the folding-carton industry on important innovations in carton and machine design. But he outlined areas of much-needed improvement if folding-box suppliers are to meet competition, especially from plastics, and improve their sagging profit margins. Mr. Enzie urged members to: (1) intensify their training programs for both sales and technical people; (2) encourage more direct communication between their own technical people and those of the customer, something many supplier salesmen tend to inhibit; (3) concentrate on expanding present markets rather than try to capture unfamiliar ones; (4) keep market-development programs in balance with carton and machinery development, and (5) acknowledge that price, quality and service—while of utmost importance—aren't everything. The packager can rightly expect these as a matter of course.

The boxmaker must go further and make a genuine contribution of time and talent in solving the packager's specific problems if he hopes to keep the business. Mr. Enzie further advised FPBAA members to realize in advance that an improved package may at any time take over important segments of their market. Boxmakers will then be prepared to decide quickly, should this happen, whether they will (1) diversify sufficiently to produce that type of package or (2) relinquish the business and attempt to make up the deficit elsewhere.

Dr. C. Wilson Randle of Booz, Allen & Hamilton confirmed what most boxmakers already know too well—that only transportation equipment and lumber have had a more acute decline in profits than the folding-carton industry in the period of 1950-1960. Yet within this gloomy framework three folding-carton producers (unidentified) have achieved remarkable success. One of these companies had profits last year some 118% above the industry average. So it can be done, Dr. Randle emphasized.

Interestingly, when BA&H recently queried presidents of these three outstanding boxmakers as to their secrets for success, "sound organization and management" ranked sixth. Way out in front was the concept of selective marketing—of choosing specialized markets and then tailoring service and know-how to fit these specific requirements. (This concept is in marked contrast to today's pattern of merger and diversification in the folding-carton industry.) The successful presidents also listed, in order, modern facilities, distinctive products, customer services and sound pricing as responsible for their companies' good showing, Dr. Randle explained.

D. A. Forsberg, Forsberg Paper Box Co., Madison, Wis., was reelected FPBAA president. New members of the executive committee are W. W. Fitzhugh, Jr., New Haven

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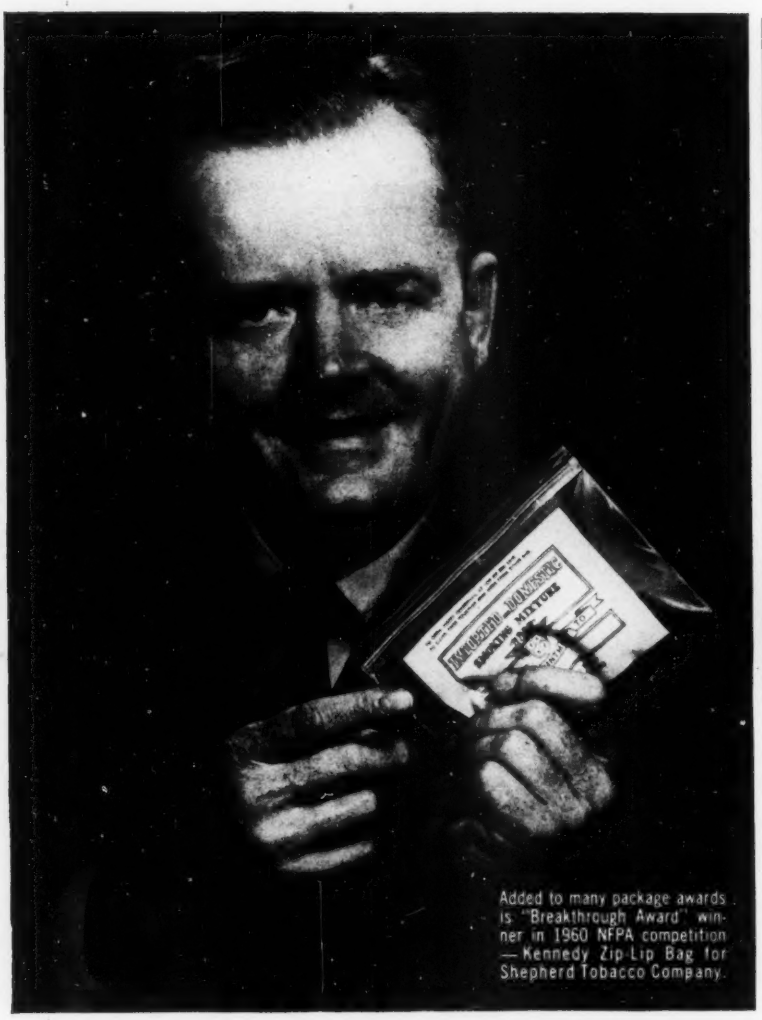
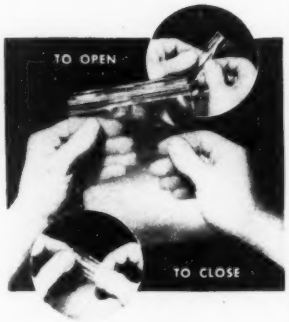

Added to many package awards is "Breakthrough Award" winner in 1960 NFPA competition — Kennedy Zip-Lip Bag for Shepherd Tobacco Company.

Why don't you sell your product in Zip-Lip bags?

■ It shows its contents clearly—protects completely. Its built-in "zipper" permits reuse time and time again. Its "Buy-Me" appeal outsells other packages at point-of-purchase. It's the flexible package that will sell *more* of your product.



Kennedy

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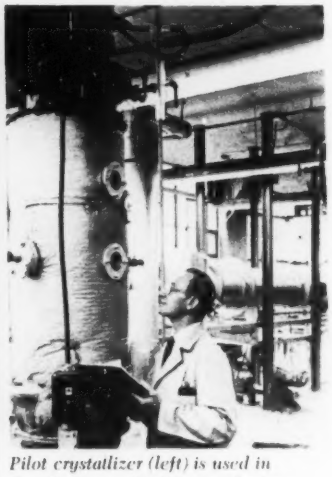
Board & Carton Co., New Haven, Conn., and E. B. Wall, Federal Paper Board Co., Bogata, N. J. Re-elected are: Herbert C. Bernard, Shuttleworth Carton Co., New York; Charles Ruble, Sr., Standard Paper Box Corp., Los Angeles; Leo H. Schoenhofen, Container Corp. of America, Chicago; and Charles B. Stauffacher of the Continental Can Co., New York. ●

Olin research center

A commercially practical way of making aluminum from common clay and research projects including new protective packaging films were announced at the dedication of Olin Mathieson Chemical Corp.'s new research center in New Haven, Conn.

Dr. William E. Hanford, Olin vice president for research, reported development through the pilot-plant stage of a process for purification of aluminum sulfate "which puts us one step closer to having a commercially feasible process for producing alumina from clay."



Pilot crystallizer (left) is used in developing method for producing aluminum from clay at Olin's new research center in New Haven, Conn.

Thus, the availability of cheap coal may become the principal factor in the choice of aluminum reduction-plant sites, since costs of transporting bauxite to the site would no longer have to be considered, Dr. Hanford said. Today alumina is made from bauxite, most of which is obtained from overseas sources.

Approximately 600 scientists, engineers and technicians are located at the new $7,500,000 Olin research center in New Haven, where the

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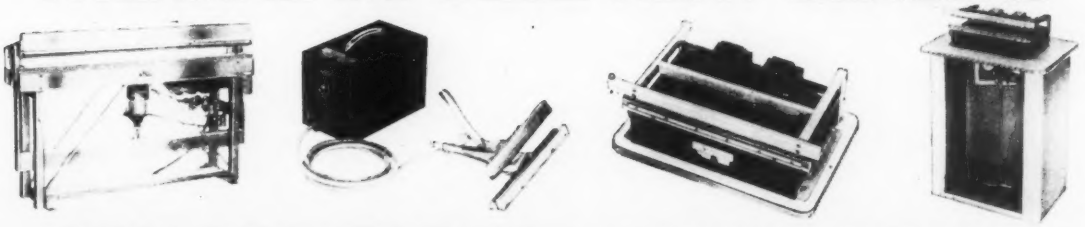

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company has concentrated all its organic and inorganic chemicals, fuels and propellants, explosives, packaging film, metals, firearms and ammunition research. During the past two years, Olin has spent nearly $3,000,000 on improvement of facilities and consolidation of these research activities at New Haven.

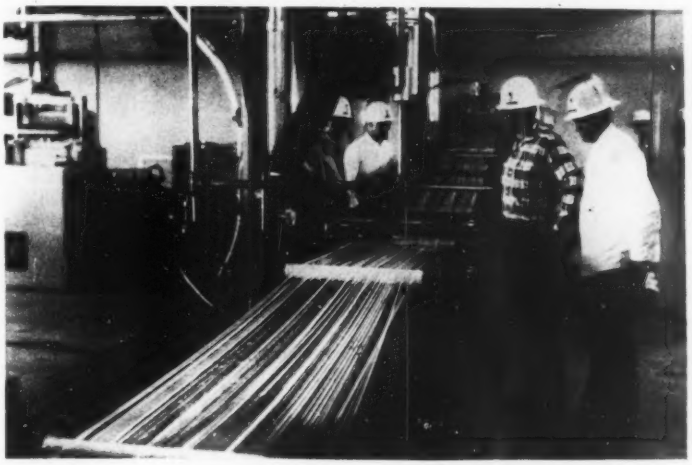
The laboratories are equipped to investigate reactions from sub-zero to several thousand degrees Fahrenheit and under pressures of 3 mm. or tens of thousands of pounds. The facilities also enable Olin researchers to separate and identify impurities in less than one part in 10,000,000 or to produce hundred-pound samples for evaluation by customers or applications laboratories.

Using the most modern machines and techniques, they can measure the useful life of anti-freezes in automobile radiators, develop welding methods; cast, extrude and coat films; test freshness of foods; evaluate exotic fuels for rockets and missiles; create new urethane-foam compositions; finish metals, and even try to find out what type of shotgun will give the sportsman of the future the most pleasure. ●

New polyolefin plant now operating

Official opening of the Hercules Powder Co.'s second polyolefin plant in Lake Charles, La., last month adds an immediate 60-million pounds of resin capacity to the burgeoning field of polypropylene and high-density polyethylene packaging. The new facility can produce either of these important plastics.

Under construction by Hercules at the same site is another 60-million-pound unit scheduled for completion in 1962. When added to the 80-million-pound output of Hercules' original plant at Parlin, N. J., the new production facilities will give this company an eventual output of 200-million pounds—an indication of the



Polypropylene manufacturing operation incorporates lengthy cooling tank.

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faith being placed in polyolefin plastics by the country's major chemical companies.

Though high-density polyethylene is important to packagers, the spotlight was on polypropylene at the plant opening. This new plastic, produced commercially only four years ago, is regarded as one of the hottest "comers" not only in the packaging field, but in the fields of fibres and injection-molded articles as well. Reported to be the lightest in weight of all commercial plastics, this material possesses excellent impact strength and resistance to heat, chemicals and greases—properties that are expected to lead to wide packaging applications in bottles, tubes, films and extrusion coatings on a variety of substrates.

The official opening ceremonies at Lake Charles, attended by Governor Jimmie H. Davis of Louisiana and top Hercules executives, was viewed in New York by members of the press and other Hercules officials via closed circuit television. ●

Letter to the Editors

To the Editors:

Your December editorial contained two criticisms of the 1960 National Packaging Forum of the Packaging Institute:

1. "Too many papers turned out to be out-and-out selling pitches for a particular company or product . . ."

2. "The multiplicity of papers and concurrent seminars was bewildering and frustrating to any registrant who sought to cover all of his interests . . ."

As a vice president of the Packaging Institute and Forum chairman for the 23rd Annual National Packaging Forum, may I report what has already been accomplished by the 1961 Forum Committee to answer the two questions raised by you:

1. A close liaison has been established between the Forum Committee and the Technical Operations and Planning Board through the seminar chairmen to achieve a higher degree of professional excellence in this year's Forum papers and to minimize commercialism.

2. The Forum chairman has announced the decision to reduce the number of seminars in the 1961 Forum to a maximum of 12. The committee has further reduced the number of papers to be presented in

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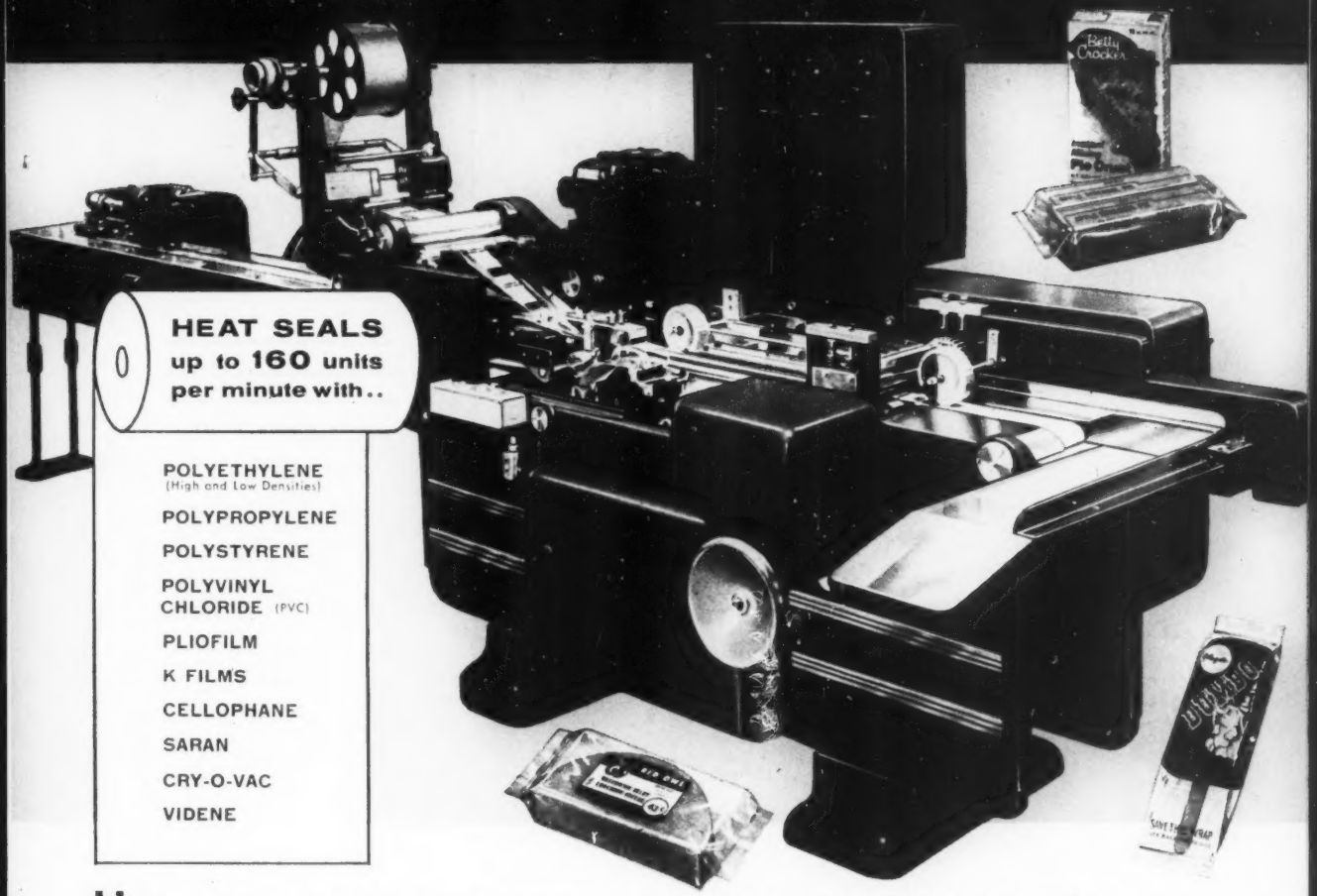

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High speed packaging up to *160 units per minute* with almost every type of heat-sealable flexible material—*including shrink films*—is now possible on the CAMPBELL Wrapper. Exclusive method of "float" wrapping from continuously fed roll stock permits trouble-free packaging production without static interference slow down or stoppage as in many reciprocating or sheet fed processes. It also minimizes product damage and waste. Constant automatically regulated heaters and controlled dwell-time insure positive longitudinal and cross-sealing of all materials. Special tunnel attachment provides for shrink films. Let us show you how the CAMPBELL Wrapper can wrap and seal an amazing range of product shapes in neat, close-fitting attractive wraps in less time, with less labor and with less material.

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A capable machine operator can convert from Poly to Cellophane by simply installing a set of crimpers with heaters and a stationary tube sealing unit — *all in less than 30 minutes!*

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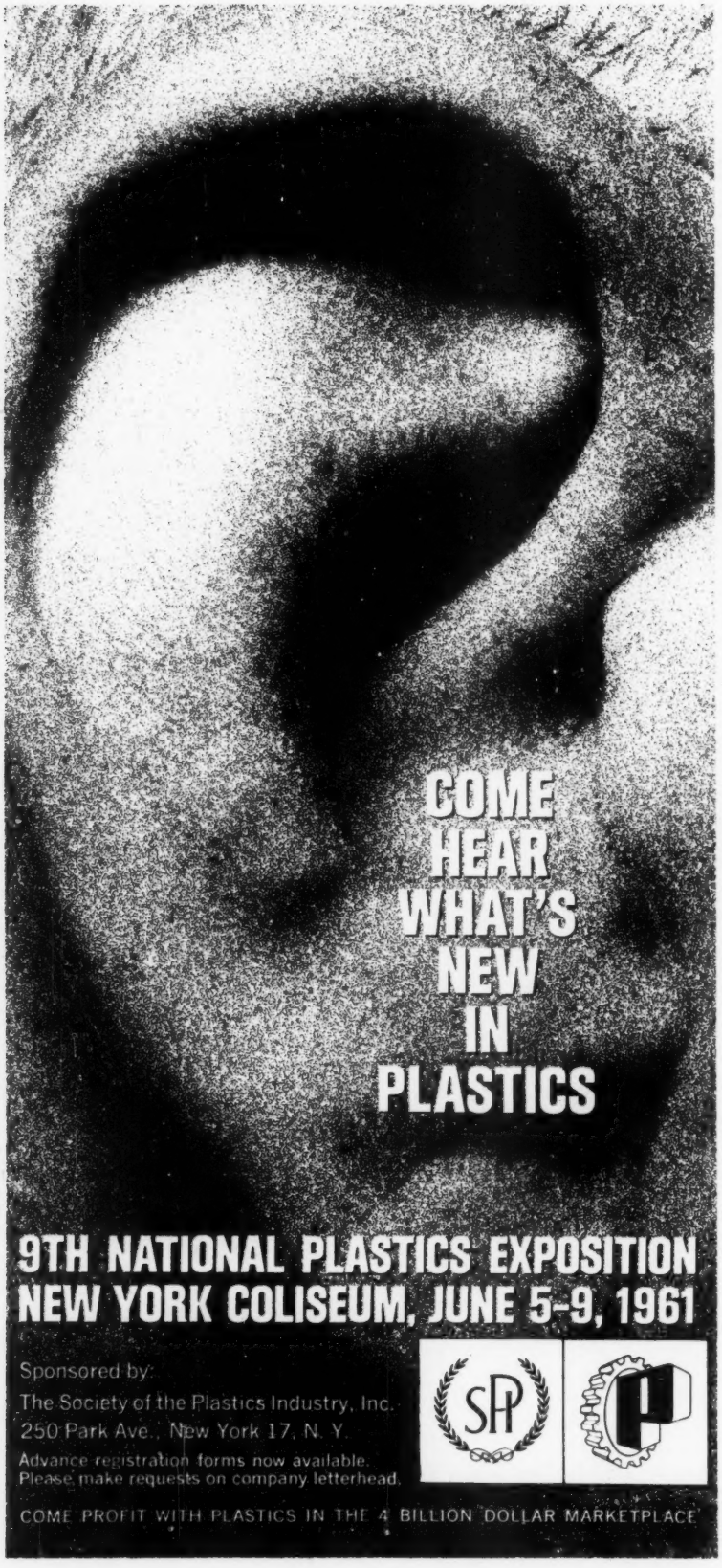

any one of the seminars to only four.

The immediate result of these two decisions is to reduce the maximum total number of papers from last year's 67 to a total of 48 for 1961.

As a further improvement to eliminate "bewilderment and frustration," the Forum Committee has adopted a synchronized timetable to enable registrants to move from one to any other concurrent seminar, knowing in advance the exact scheduled time for the delivery of any paper in which they are interested.

I believe that the Forum Committee's actions have already answered your December, 1960, editorial.

I would also like to assure you of the Forum Committee's determination to present to the packaging industry, which we both serve, an interesting program of maximum professional value and minimum commercialism in the 23rd Annual National Packaging Forum, "The Broad Horizons of Packaging Technology," scheduled for the Biltmore Hotel, New York, Oct. 18-20, 1961.

Sincerely yours,
Packaging Institute
I. G. Nichol ●

Foam plastics seminar

New and speedier techniques for manufacturing and utilizing plastic foam in packaging were disclosed by 25 speakers at a recent three-day seminar on this growing field at the American Management Assn. in New York.

In a keynote speech, R. H. Thomas of General Electric Co., co-chairman of the session, predicted vast growth for foamed plastics during the coming year and cited his company's intention of almost tripling expenditures for these light, cellular materials in 1961.

Other speakers on the program cited numerous examples of all-foam packages or combinations of these materials with corrugated board that have dramatically cut the cost and weight of industrial and consumer containers. The primary materials discussed were expandable polystyrene and polyurethane foams.

New machinery for molding foam materials received top attention, too, with descriptions of a high-frequency method for expanding polystyrene beads and several new automatic molding machines of high output and flexibility. ●

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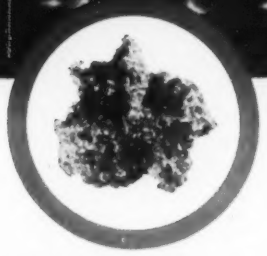

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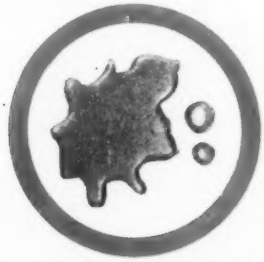

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Dogs know a good thing when it's opened – especially when it is dog food protected by Flexobag Greaseproof. This new bag liner paper is being used by an increasing number of dry dog food manufacturers to assure fresh product quality and merchandising appeal by preventing penetration of fatty substances . . . *and* at packaging costs much lower than other liner materials. Flexobag combines high grease resistance with tough bulldog strength and easy handling flexibility.

Flexobag's functional advantages are ideal for use as a liner in multiwall and duplex bags. The versatile paper was developed for a wide range of difficult packaging jobs where both protection and economy are essential. It will pay to investigate Rhinelander's new Flexobag for *your* product. Write for full information and samples.

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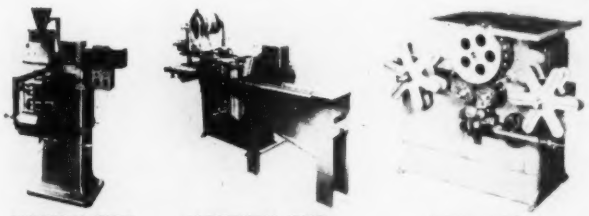

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Premiums out front

An impressive example of the package graphics necessary today to promote premiums in highly competitive consumer-goods fields is the design treatment for Lever Bros. Co. cartons of Silver Dust and Breeze. Entire illustrative emphasis is on faithful full-color reproductions of Cannon bath towels, dish towels and face cloths included in the cartons with the product. Each picture shows exactly what each premium looks like —a luxury-striped bath towel on the king-size Breeze package, a candy-striped dish towel on the giant size and a colorful folded washcloth on the regular size.

End flaps and side panels are given particular attention, too, since research revealed that about 60% of all wash-day carton packages are end stacked in supermarkets.

SUPPLIES AND SERVICES: Design by Dixon & Parcels Associates, 485 Fifth Ave., New York 17. Cartons by Worcester Paper Box Corp., 970 Dellsway, Medford 55, Mass. ●

Realistic reproductions of enclosed premiums dominate colorful Breeze cartons.

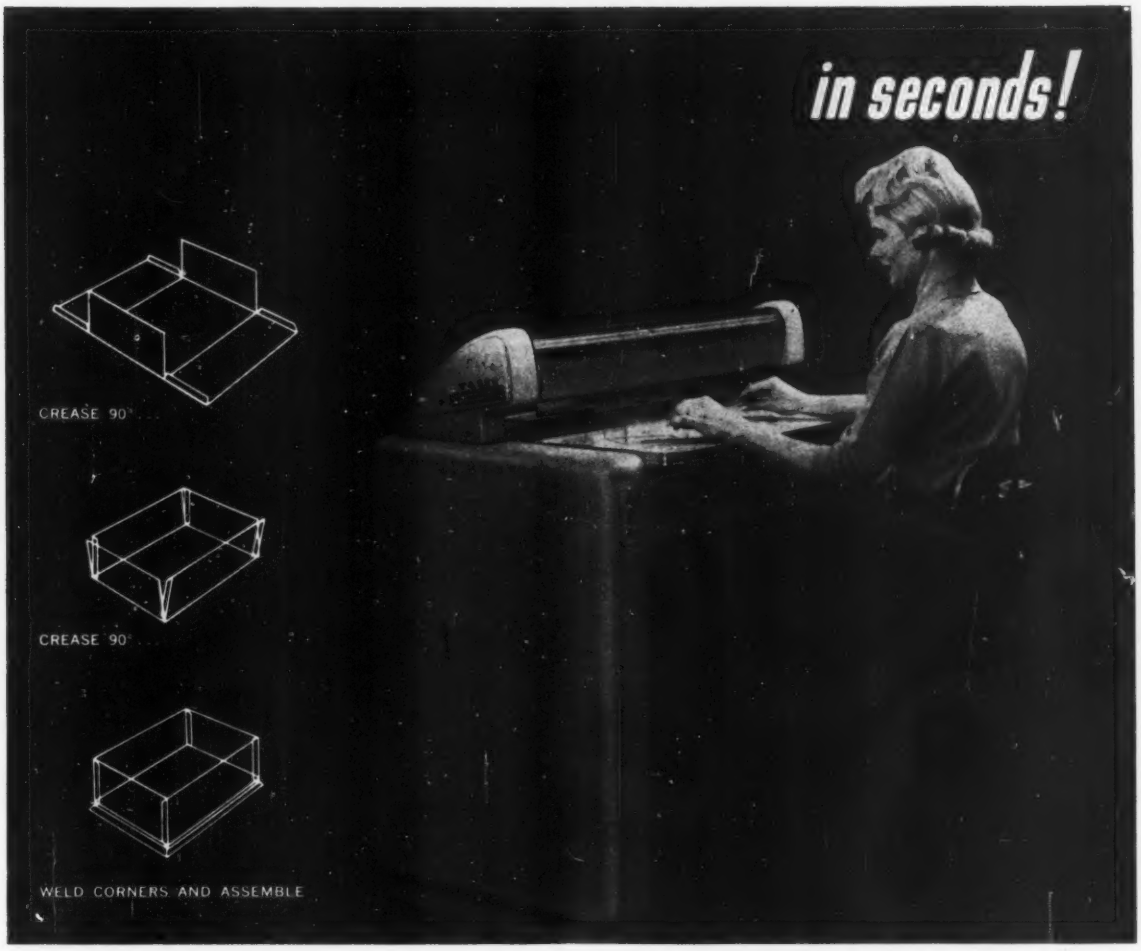
Research by computer

The use of computers as a simulation device to compress years of firing-line experience into computer minutes has been suggested by Dr. Myron J. Helfgott, vice president for research, Lippincott & Margulies, Inc., New York, as a new approach to package-design research.

Dr. Helfgott was one of four speakers at the first package-design research symposium of the Package Designers Council at the University Club in New York during March.

Noel Schwartz, director of research for U.S. Testing Laboratories, described commercial research techniques in use by his company to demonstrate that consumer preference can definitely be affected by the element of design in a package.

Discussing statistical and conceptual limitations, Dr. Gerhart Wiebe, director of research at Elmo Roper



Just push the blank against the gage and move the treadle forward! The heated blade presses the material into the forming die to make the crease . . . quickly, accurately. Release the treadle and the blade is lifted high for easy removal of the work piece. Blade temperatures can be closely controlled by an adjustable thermostat. *Consistently uniform creases are assured!*

Sturdily built, this compact machine can be used to produce a tremendous variety of square and rectangular boxes from rigid thermoplastic sheet (.005" to .020" thick).

For detailed information on the Model 123, as well as literature illustrating the entire line of Taber plastic fabricating equipment, mail the coupon below.

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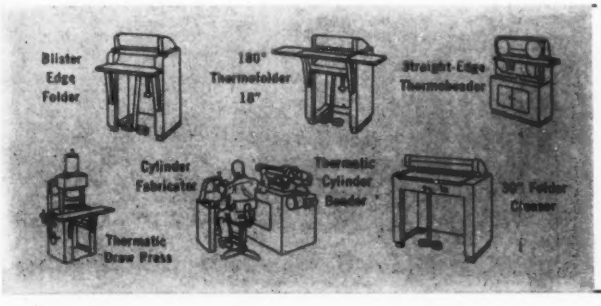

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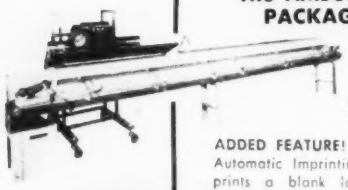
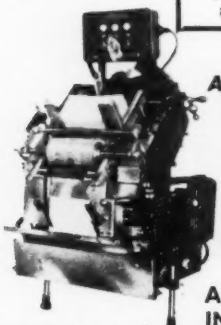


The AMSCOMATIC 100 PACKAGING UNIT

Available in 3 types of infeed conveyors to efficiently handle rigid or soft products or a combination of both . . . automatically.

ADDED FEATURE!
Automatic Imprinting and Ticketing. Imprints a blank label and applies to package.



AMSCO BAG SEALING MACHINES
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For sealing, header-labeling, imprinting, punching, code dating bags made of cellophane, polyethylene, saran, etc.

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Models for straight sealing bags and pouches of all heat-sealable materials.

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& Associates, proffered a rule of thumb regarding the type of research samplings largely used for package research. Seemingly small samples could prove valuable if carefully examined and considered along with other factors. If taken by themselves, at face value, he pointed out, such sample findings could prove to be a delusion.

Dr. Herbert Krugman, vice president for research, Raymond Loewy-William Snaith, Inc., pointed out that most of the conventional package-research techniques have overlooked the effect of familiarity on design preference and that experiments simulating repeated exposure (and/or familiarity) have indicated that design elements in a package can eventually be controlled to produce the optimum combination of initial preference and "long-wearing quality." ●

Mass impact

By combining illustrations of cans in full color on one side and poster-design brand identity on another of its six-pack carriers, Stroh Brewery

Varied mass-display patterns are possible with Stroh six-pack carriers.

Co. enables retailers to arrange dramatic mass displays.

The can reproduction is full size on the side panels. The other panel, top and ends are dominated by the Stroh trademark and Lion crest. The cartons may be faced with the can label and the trademark panel in alternate rows either horizontally, vertically, checkboard style or in other patterns.

SUPPLIES AND SERVICES: Carriers by Western-Waxide Div., Crown Zellerbach Corp., 2101 Williams St., San Leandro, Calif. ●

...and NOW it's sugar

California and Hawaiian
Sugar Refining Corp.
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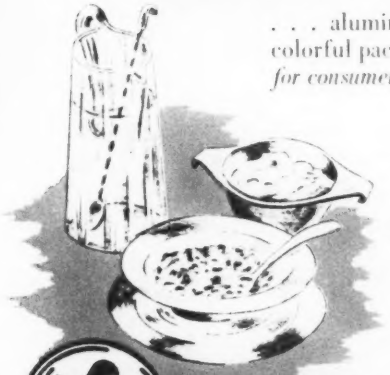
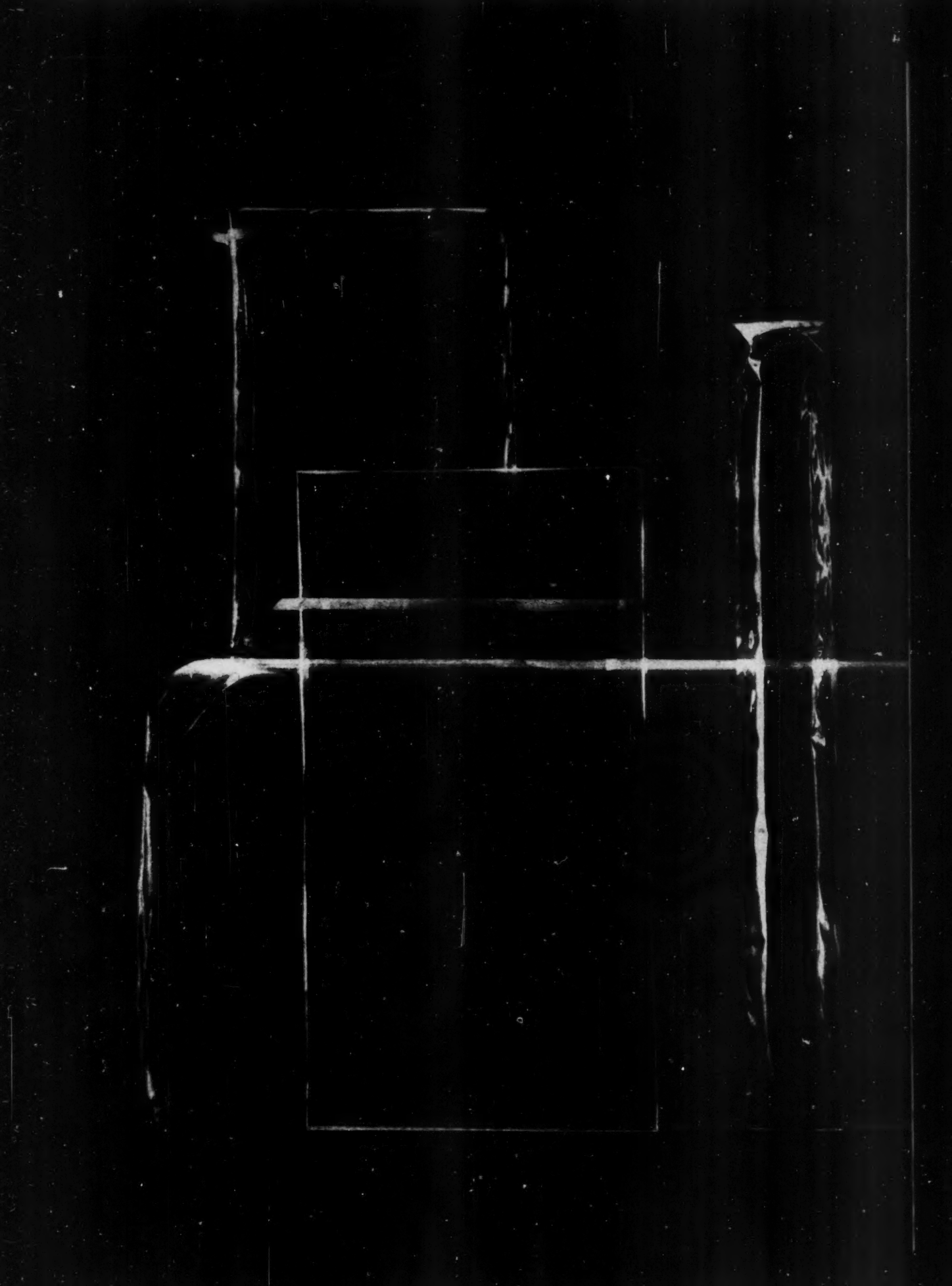


. . . aluminum pouring spouts to their colorful packages of granulated cane sugar *for consumer preference.*

No longer will users be annoyed by spilled sugar. Now they can pour C & H right from the package into sugar bowls, measuring spoons or sprinkle it directly on their cereal.

SEAL SPOUT Corp.
MOUNTAINSIDE, NEW JERSEY



Du Pont cellophane makes news . . .

6 new cellophanes that save packagers up to 16%!

Announced at the Packaging Show—6 new high-yield Du Pont cellophanes that give more packages per pound at no extra cost! This means savings up to 16% right now for packagers in the baking and tobacco industries. For others, it is an indication of things to come from Du Pont.

Here's what this latest Du Pont development offers:

- 4,000 more square inches per pound of new Du Pont "K"* cellophane 250-201. New yield—25,000 square inches per pound. A 16% cost saving!
- 1,000 more square inches per pound of each of these 5 new Du Pont cellophanes: 220 MSD-60, 220 MSD-58, 220 MSD-58T, 220 MD-31, 220 MD-32. New yield of each film—22,000 square inches per pound. A cost saving of approximately 5%.

For example, on standard size units, packagers can now get 16 extra bread overwraps per pound...40 extra cigarette packs per pound...69 extra cigar wraps per pound.

High yields, lower heat-sealing temperature, 15 new cellophanes in the past year. That's progress...proof of cellophane's versatility and vitality in meeting your changing needs. Ask your Du Pont representative which of Du Pont's over 100 special cellophanes is best for you. Du Pont Company, Film Department, Wilmington 98, Delaware.

*Du Pont registered trademark

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DU PONT cellophane

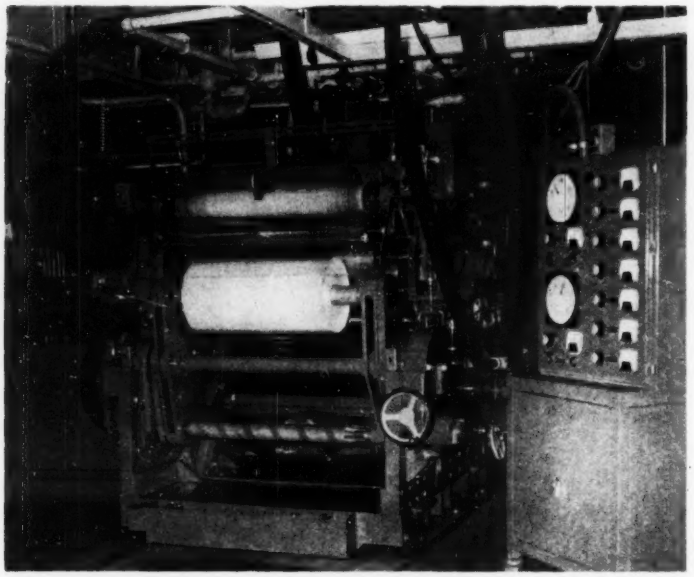
Better Things for Better Living
...through Chemistry

In-plant film maker

Sharper material specifications, sanitary handling and reduced costs are said to be the reasons behind the in-plant fabrication of polyethylene packaging film being pioneered by E. J. Brach & Sons Co., Chicago.

Even any consideration of such captive manufacturing operations for film has been rare because of the high level of technology required to produce a polyethylene film good enough for packaging. However, this candy company, which has chalked up many other firsts in the field of packaging technology, is convinced that it can produce a top-grade film at substantial savings.

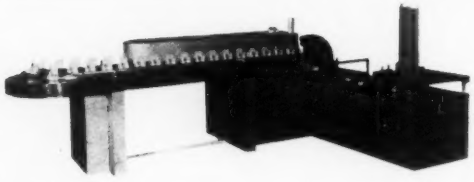
Film manufacture at a packaging plant shows extruder (far left) and the chill-quenching and wind-up rolls (right) employed at Brach.

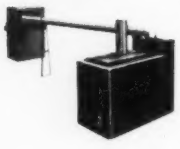


Brach is utilizing a chill-roll quenching process that produces a low-density polyethylene film with great strength and superior clarity and surface gloss. Because of these properties, the chill-roll type of film is gaining increased usage in the packaging field for many food and non-food applications. Brach uses the film for pouch packaging a wide range of candy items.

On the Brach machine, the molten film sheet is processed through a series of three highly polished and chilled rolls, which impart the surface characteristics and gloss that improve clarity of the film. A subsequent roll, equipped with a surface treater, prepares the film for printing. The material is then trimmed and formed into rolls on a turret winder.

SUPPLIES AND SERVICES: Extruder and chill-roll caster by Waldron-Hartig Div., Midland-Ross, New Brunswick, N. J. ●





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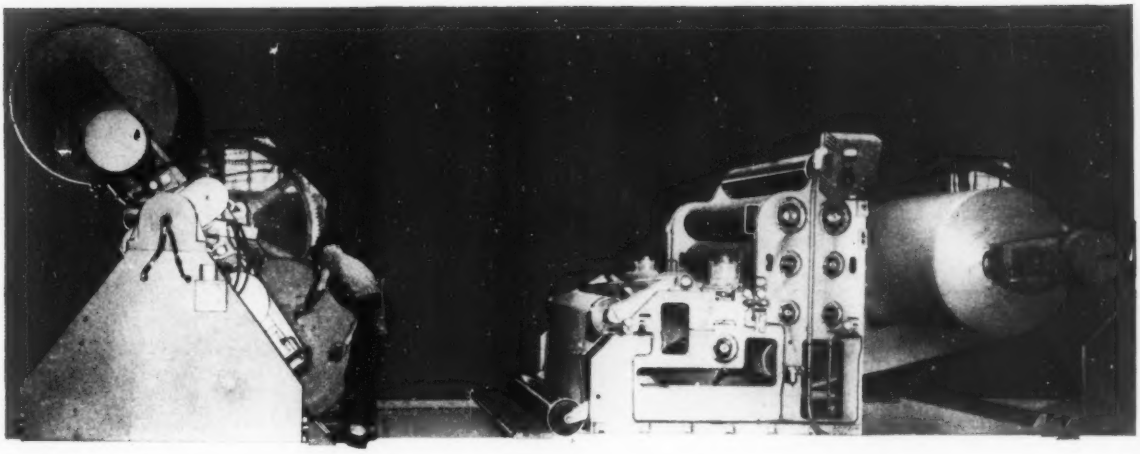

INTA-ROTO 5-PLY BOARD LAMINATOR for International Paper Co.

Shown above are turnover unwind stand and butt splicer unit, which with many other units make up a machine approximately 200 feet long—designed and built especially for International Paper Co. kraft mill at Georgetown, S. C.

This versatile machine will laminate 2-ply materials at speeds up to 1000 feet per minute, and as many as five plies at lower speeds.

For continuous operation, it is equipped with two turnover unwind stands and two butt splicers. Also there are three 2-roll unwind stands equipped for overlap splicing. Automatic guides assure accurate alignment without excessive trim waste.

Rolls 100" wide and up to 72" in diameter are accommodated.

Under accurate tension controls, the several webs are guided into four precision laminating stations of famous Inta-Roto GM-1000 design. Precise applicators assure perfectly laminated sheets, without curling, or waste of adhesive. Laminated web travels to continuous rewinder, or to slitting and sheeting unit. The design permits various combinations of foil, film, or plastic materials, as well as paper laminations. A station for printing, coloring or coating is provided, and a drying tunnel permits use of solvent or aqueous-type coatings or inks.

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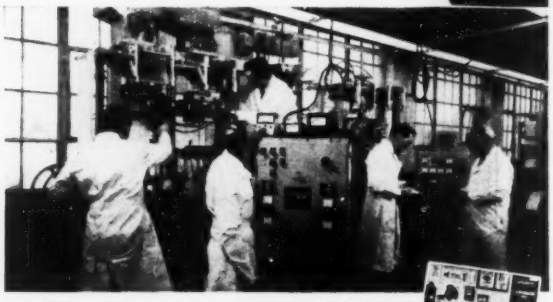

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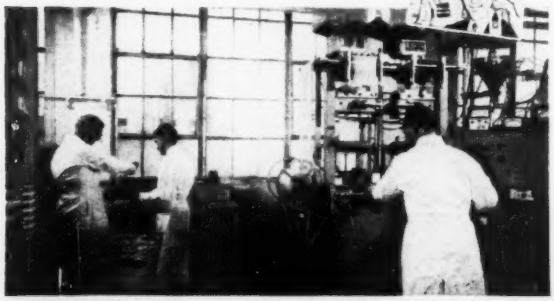

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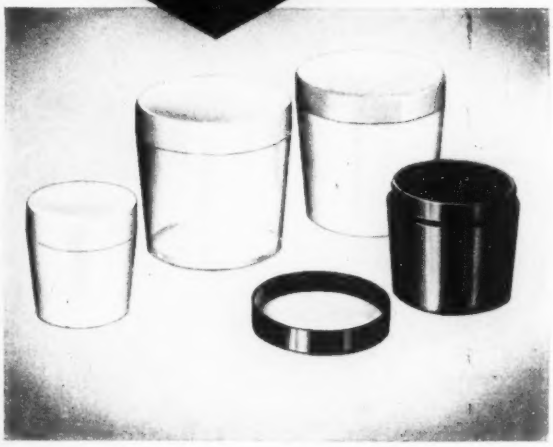

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Flexible packaging

While still troubled by the cost/price squeeze which has plagued them for so long, converters attending the National Flexible Packaging Assn.'s 10th annual meeting in Chicago recently were generally optimistic. The consensus was that sales this year should be the highest ever. While profits are still not what they might be, converters hope to improve them by a more realistic evaluation of costs. NFPA members will be increasingly selective in the types of business they encourage. Even those converters who have built reputations for custom work, it was said, will be dropping unprofitable fringe areas to concentrate their attention on volume business.

Speakers described the latest products and ideas for expanding converter markets. AviSun announced upcoming availability of the first oriented polypropylene film, which combines fine barrier properties with excellent machinability, high tensile and impact strength. Heat sealability is still a problem with this film, says AviSun, but can probably be corrected.

Boilable packaging got much attention. Better laminating adhesives are under development for both films and foils. While polyester films are expected to remain the most widely used material for boil-bags, polyolefin improvements—both polyethylene and polypropylene—were believed to have good boil-bag potential. Minnesota Mining is now working on new processing and packaging equipment as well as materials for boilable bags, including a consumer gadget to aid in removing hot foods from the bags. 3M is also about to market a flocked polyester film which is heat sealable and has potential packaging applications and can also be used as applicators on containers for such products as insecticides, shoe polish and dressings, even cosmetics.

Consultant Faber Birren discussed trends in package design.

New products got most program attention, but oldtimers were by no means neglected. Polyethylene bags are still in great demand and machinery manufacturers think that there is a greater need than ever for more efficient bag-making, loading and closing equipment for polyethylene film. ●

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STRUCTURAL DESIGNER FOR FOLDING CARTONS—Require man fully competent in the area of carton styling and development to join an integrated carton organization with complete production facilities. Please give full details regarding education and experience. Reply to K. E. Booth, Olin Mathieson, P. O. Box 488, West Monroe, Louisiana.

PACKAGING DEVELOPMENT CHEMIST—B.S. or M.S. Chemist or Engineer with at least 3 years experience in flexible packaging. Familiarity with properties of plastic films, laminates and coatings and with end-use requirements for specific applications in the food industry would be desirable. Position offers challenging work, good salary, benefits and growth potential. Pleasant suburban location in North Central N.J. 45 minutes from N.Y.C. Mail complete resume with salary requirements to Personnel Manager, Air Reduction Co., Inc. Central Research Laboratories, Murray Hill, New Jersey.

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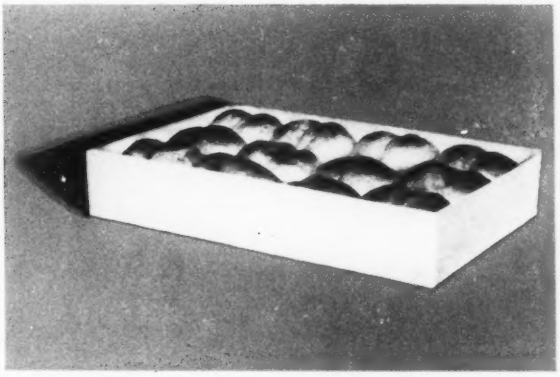
SOLUTIONS TO 4 COMMON LAMINATING PROBLEMS

(and how the Arabol man can provide them)



1. GREASE RESISTANT LINER TO PAPERBOARD—Millions of boxes are used monthly by the bakery trade. A large percentage of these are made by adhering a grease resistant liner to paperboard. Adequately bonding these surfaces depends on the rate of set and the moisture and grease resistance of the adhesive, so that a non-wrinkling, non-curling lamination is produced. If you have experienced problems in this area or in the adhesion of difficult materials, talk them over with your Arabol man. He can help you.

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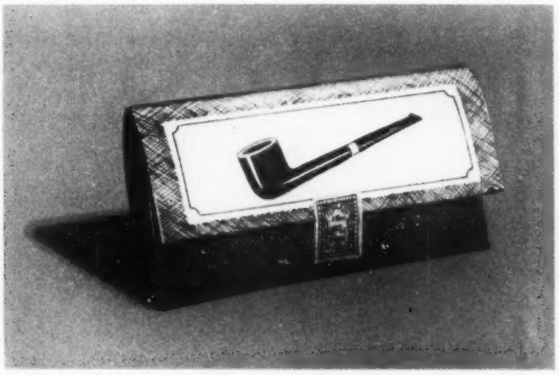
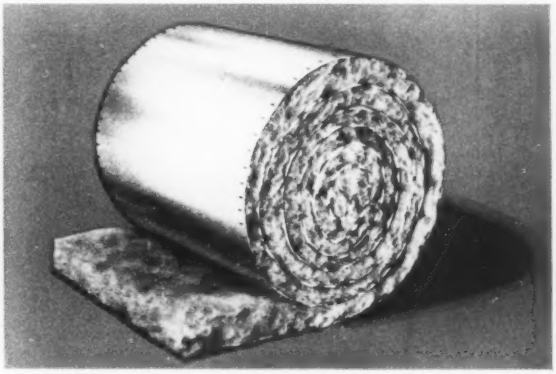


3. CELLOPHANE TO POLYETHYLENE — One of the most widely used packaging materials in the food field is laminated cellophane and gluable polyethylene. Adequate bonding of these materials demands an adhesive with three distinctive properties: 1. Good adherence. 2. Transparency. 3. Stability against wide-temperature changes. There are a number of adhesives in the Arabol family that fulfill these requirements . . . consult your Arabol man. He'll be glad to tell you about them.



4. FIBERGLAS TO POLYVINYL CHLORIDE—Because of the nature of both materials, these increasingly popular insulating materials can bring bonding problems — blistering, bleed-through and mold growth sometimes develop. The plastic film (or even foil) does not readily take to average adhesives. However, there is one special emulsion adhesive which is highly effective for economical and durable bonding of the two difficult surfaces. Your Arabol man will be glad to talk with you about it.

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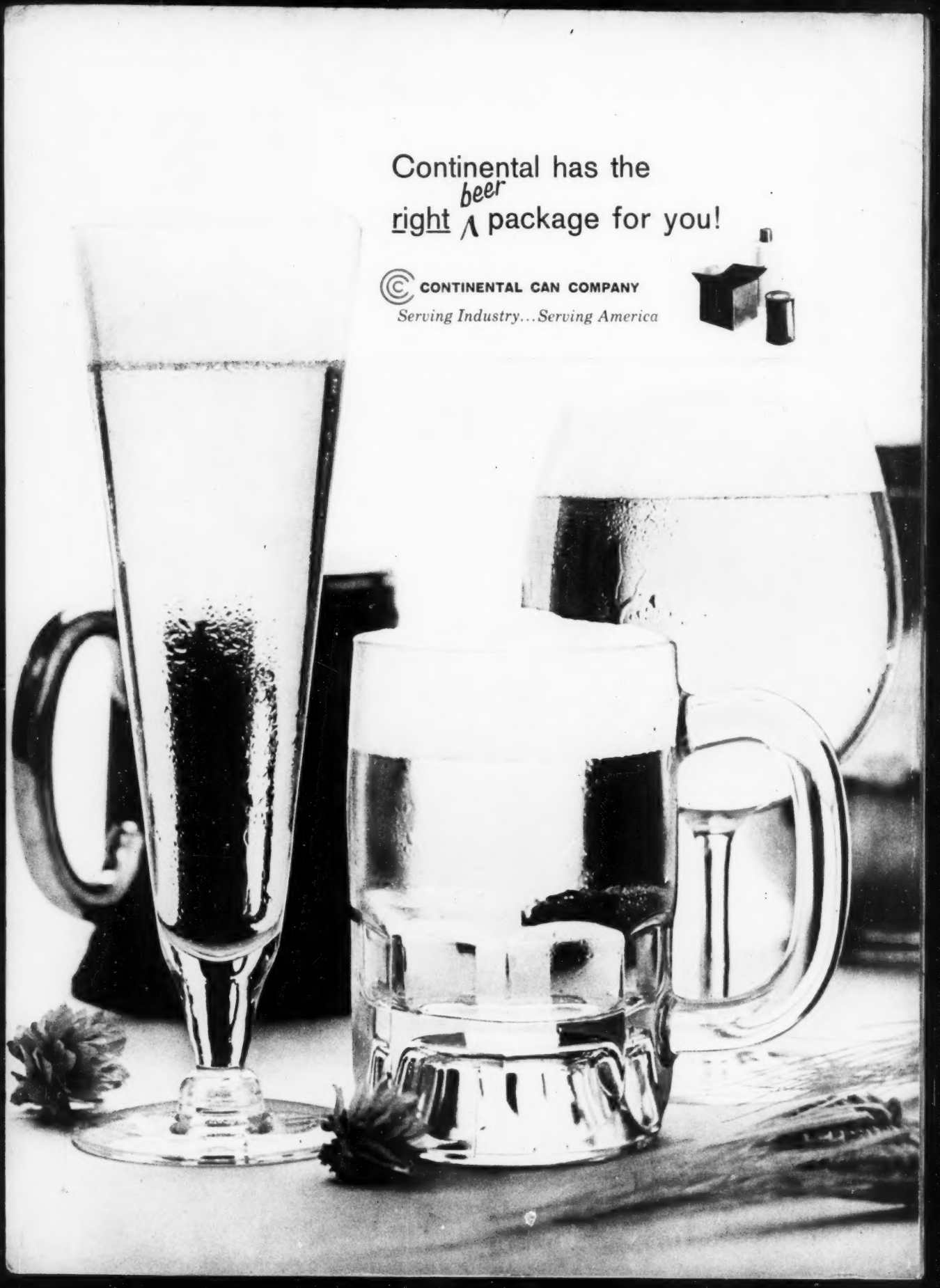
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